Researching Educational Issues: An Analysis of Methods Used in Conducting Doctoral Research

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Abstract

The complexity of educational issues underscores the need for rigorous inquiry, whose findings are to drive appropriate reforms. There have been long-standing debates among scholars on which of the qualitative and quantitative methods is more rigorous in contributing towards shaping education. While some scholars believe that since education deals mostly with human behaviour which is value laden hence, research in education should adopt the qualitative approach. This study analyzed the predominant methods adopted in conducting inquiry into educational issues and compared them with other disciplines using the abstracts of 428 PhD students' dissertations spanning a period of 10 years. Findings show that quantitative method dominated research in education and the sciences, while qualitative method was popular in the arts/law. However, a combination of qualitative and mixed methods was common in the social sciences. Implications of findings for skills' enhancement in research methods and rigor in educational research are discussed.

Key words: Quantitative approach, Qualitative approach, Mixed-methods approach, Research in Education, Research rigor

Introduction

The mandate of higher education is to conduct research whose findings are meant to solve societal problems, to enrich the content of teaching and to contribute to growth and sustainable development through the services rendered to the society. Obanya (2016) referred to these as 'the tripartite mission of universities,' a phrase that attempts to clarify what higher education is meant to achieve: research, teaching and knowledge sharing. While not attempting to rank order these three activities in terms of their importance, it is recognized that a high-quality research enriches the content of what is taught and invariably enhances the quality of services rendered to the society. Therefore, education without research runs the risk of basing its practices on dogma, theory, ideology, convenience and prejudices (Field, 2011).

Taking cognizance of the importance of research in higher education, conceptualizing a research idea, implementing it and reporting its findings is a major condition upon which the award of a doctoral degree is based. In most cases, if not all, the award of Doctor of Philosophy is based on satisfactory

completion of these tasks. Doctor of Philosophy is regarded as the basic qualification for teaching at the university level, at least in Nigeria. Hence, the purpose of undergoing doctoral research is to enhance knowledge of content, impact skills and experiences of would be academics (pre-service lecturers) to be better positioned to solving problems in their specific areas of specialty and, more generally, in society.

Researchers employ a wide range of designs to investigate a problem, whether it be in agriculture, education, health, science, technology or others. Often different fields nurture research culture that is peculiar to their discipline. For example, pure experiments (quantitative approach) are predominant in the biological, natural, physical sciences and medicine. Beardslee, Wright, Salt and Drezner (1997) observe that randomized trials are predominant in medical sciences and certain areas in behavioural and social sciences. Studies on behavioural approaches to smoking cessation (Piesterse, Seydel, DeVries, Mudde & Kok, 2001), and effectiveness of Salk vaccine (Lambert &Markel, 2000) are examples of pure experiments. Such trails are not common in education research for some ethical reasons. The liberal arts such as anthropology, sociology and philosophy mostly employ the qualitative design due to the nature of the disciplines.

The field of education offers wide opportunities for researching due to the wide variety of problems bedeviling the education sector in many developing countries of the world. Prominent problems relate to teacher quality, teaching facilities and resources, poor performance of students, examination malpractice, and funding. Therefore, implementation of research is mainly dictated by the nature of the problem and the purpose of the research. Additionally, the choice of which approach to use is mainly dependent on the skills and experience of the researcher, as well as the purpose of the research (Falaye, 2018; Keeves, 1988; Patton, 2002). Importantly, the design of a research must be appropriate for its implementation; otherwise findings emanating from it will not be credible and usable. This study seeks to explore and describe the methods that are used to conduct doctoral research in the field of education and compare them with methods that are used in other fields.

Review of Literature

Generally, literature advances three major approaches to research namely qualitative, quantitative and mixed methods (Babbie, 2007; Creswell, 2014; Weitman, 2000). These approaches stem from different traditions and therefore differ in purpose as well as methodology (Pyrczak, 2003).The selection of any of these three is, thus, influenced by the philosophical orientation about the world and the nature

of the research that the researcher is interested in conducting. For instance, a researcher chooses qualitative, quantitative or mixed methods depending on the worldview of the researcher (Creswell, 2014; Guba, 1990; Neuman, 2009). As a result, the positivists and postpositivists, who believe in quantification (Phillips & Burbules, 2000), dominate the quantitative approach. They believe in the linkage between cause and effect, meaning that outcomes are determined by specific causes. That being the case, the positivists/postpositivists develop hypotheses and research questions; develop numeric measures, collect data and analyze them using statistical packages (Creswell, 2014). Their worldview is generally referred to as scientific research or empirical science that lean heavily on the quantitative approach.

Another approach is the constructivist worldview, which is considered deterministic. This philosophy holds that human behaviour is unpredictable, hence researching human beings with predetermined questions, collecting data using instruments with close-ended questions and subjecting the data to statistical analysis. Rather, social constructivists work in the natural setting; depend on the information (data) collected through interactions with their study participants, themselves being the instrument (Bogdan & Taylor, 1975; Lincoln & Guba, 1985; Patton, 2002). The researcher makes sense of the data through interpretation (inductive analysis). The themes that emerge represent their findings instead of numerical results. This position characterizes the naturalists- qualitative research, which has made its marks conceptually in the social sciences and education (Bogdan & Biklan, 1982; Patton, 2002).

Underpinning the mixed methods paradigm is the pragmatic philosophy that pays attention to the research problem and uses workable and appropriate approaches that can answer the research questions. The pragmatists employ multiple approaches - mixed-methods, justified by the fact that research problems that need to be tackled exist in diverse contexts, such as social, economic, historical and political, establishing the purpose of using mixed methods, either for exploratory or explanatory reasons (Babbie, 2007; Creswell, 2014). The belief is that the world is not static, therefore, mixed methods researchers are not restrictive, rather, they use many approaches for collecting data instead of limiting their research to only one approach. With this background, it would appear that a mixed methods approach is more applicable in the behavioural and social sciences than in the core sciences, provided the researcher is able to provide a justification for his/her choice.

There has been a long-drawn debate among researchers from the different worldviews, each laying claims to certain principles. For instance, the quantitative researchers (positivists) claim that their approach

is more scientific and rigorous (Carey, 1993). The question is: what constitutes scientific research? Scientific research in any field is a process of rigorous investigation, which is supported by appropriate theory and framework that guide it, the methods used in conducting the research and findings that emanate from it (Shavelson & Towne, 2002). For an inquiry to be scientific it should be guided by a set of standards for conducting the research and assessing the validity of the findings therefrom. Although the National Research Council argues that the design of a study is not what makes a research scientific, however, the design must allow direct empirical investigation of a research problem, follow the conceptual framework, account for the context in which the investigation was carried out and present the findings such that they are open to discussions among researchers and other stakeholders (Shavelson & Towne, 2002).

Although it is not the purpose of this paper to add to the debate on the superiority between the quantitative and qualitative methods, it is observed however, that more texts have been written on quantitative research methods than the qualitative research and analysis (Bogdan & Taylor, 1975; Denzin & Lincoln 2000; Glaser & Strauss, 1967). Confirming this position, Pyrczak (2003) noted that, generally, reviewers are likely to locate many more articles reporting quantitative research than qualitative research due to the dominance of the quantitative research in the social and behaviour sciences since the 1900s. Notwithstanding these observations, some scholars believe that both quantitative and qualitative methods are not fundamentally different modes of inquiry (Howe & Eistenhart, 1990; King, Keohane & Verba, 1994), both can be pursued with vigor to yield credible results (Shavelson & Towne, 2002).

Not much investigation has been carried out to reveal which design is predominant in education, especially in Nigeria. However, close observations reveal that doctoral students prefer the quantitative approach over qualitative, and the mixed methods approaches. On the other hand, through formal and informal interaction with graduate students at the University of Botswana (UB), South Africa, it appears that the qualitative approach is most often predominantly used by education graduate students in South Africa (Nenty, 2009). This observation prompted Nenty and Adedoyin (2010) to further explore the research orientation of 79 graduate education students at the University of Botswana. According to these scholars, the trend becomes worrisome as the proportion of UB graduate education students willing to undertake quantitative research dwindles. Students' mindset and supervisors' indoctrination influenced the choice of research methods students used (Nenty & Adedoyin, 2010). This is contrary to Keeve's (1988) opinion that the methods employed in educational enquiry should be influenced by the nature of

the problems that the student/researcher is considering.

In addition, the decline observed in the use of quantitative methods could be traced to inadequate skills of both supervisors and students in the use of qualitative methods. Likewise, Allen, Eby, O'Brien and Lentz (2008) raised some concerns after reviewing the methodology and content of 200 published mentoring articles that, among others, include lack of experimental research and over reliance on cross-sectional designs. Further still, the investigation conducted by Ige and Omilami (2016) perhaps is one of the few empirical attempts that can be cited in Nigeria. They compared doctoral research theses from science and mathematics education units from two universities, one in Nigeria and the other in the United Kingdom. The variables of interest include choice of topics, research approach adopted, the target population and the duration of field work. Findings reveal that while a few researchers adopted the mixed methods, most research conducted in Nigeria used the quantitative approach. Only two out of 21(9.52%) doctoral theses in a Nigerian university adopted the qualitative approach. None of the sampled researchers used the mixed methods. On the other hand, most doctoral theses in science education in the UK adopted the qualitative approach (59.09%) and mixed methods (36.36%). A few used the quantitative method (4.55%) and spent more time gathering data than those from Nigeria where quantitative approach was predominantly used. Prolonged immersion in the study setting, which is a unique culture of the qualitative research, served to explain the longer duration of fieldwork for doctoral students who used the qualitative approach.

Similarly, Adegoke, (2016) observed that in the behavioural science research, the use of questionnaires [quantitative method] is common. The general opinion why students prefer to use the quantitative approach over the qualitative and mixed methods is that the quantitative approach is less cumbersome, cheaper in terms of time and funds, and faster to execute. In addition, it allows the use of a larger sample size, which makes generalizability of findings possible.

Interactions with postgraduate students' research during post field seminars revealed inadequacies in the report of doctoral research especially of those who reported the use of mixed methods in Nigeria. Inadequacies such as the use of structured instruments for collecting data on the qualitative aspect of the mixed methods and the use of statistical tools to analyze qualitative data were noted. Further still, research designs, instruments for data collection, and method of data analysis were not specified. Sometimes they failed to report findings of the qualitative aspect of their research (Falaye, 2017). It was obvious that the

students' skills in conducting mixed methods research were grossly inadequate. The frustration of an academic in another Nigerian university who obtained his doctorate outside the country with training in the use of qualitative method corroborates the poor knowledge and inadequate skills in the use of qualitative and mixed methods. During an informal interaction, he lamented "… more than 90% of my manuscripts have been rejected by [Nigerian] reviewers, claiming that they are position papers." Simply, one can infer that such reviewers, and by extension students, were not exposed to qualitative and mixed methods during their training in Nigeria. This reveals another plausible reason for the popularity of the quantitative approach among students in Nigeria.

Education research is known to have its roots in the social and behavioural sciences (Shavelson & Towne, 2002), employing pure quantitative design on the one hand and qualitative design on the other extreme. Also, by its nature education research would benefit from mixed methods design. However, empirical findings to support this assumption are very scarce.

Methodology

Purpose of the Study

Based on the foregoing, the objective of this study is to assess the methods that are predominantly used by doctoral students of education to conduct their research. Also, the study compared the methods that are commonly used in some selected disciplines with that of education. It also highlighted the observed trends in the use of the three research methods in educational research within a period of ten years. The study was guided by three research questions and one hypothesis.

Research Questions

1. What proportion of doctoral research in education was conducted using quantitative, qualitative and mixed methods;
2. What proportion of doctoral research in the social sciences, arts/law and science-based disciplines was conducted using quantitative, qualitative and mixed methods;
3. What is the trend in the use of quantitative, qualitative and mixed methods to conduct doctoral research in education within the target 10 years (2009-2018)?

Hypothesis

There is no statistically significant association between the research methods used by doctoral students in education, the social sciences, science and arts/law and their disciplines.

Research Design

This research adopted a descriptive survey. Since the primary purpose is to assess the methods used in conducting doctoral research in education and compare them with those of other disciplines, there was no treatment and the variables were not manipulated. Hence, the adoption of the survey design.

Population and Sample

The population for this study was comprised of all doctoral students that have successfully completed and defended (*viva-voce*) their Ph.D. research between 2009 and 2018. From this population, a total of 428 doctoral graduates whose abstracts of their theses were published, represent the sample for this study. (Table 1)

Data Collection

The data for this study were collected from published books and compendiums of abstracts of Ph.D. theses of students that have successfully completed and defended their Ph.D. research from humanities-based and science-based disciplines such as: agriculture, basic medical science, clinical sciences, pharmacy, public health, science, technology, veterinary medicine, arts, education, law and the social sciences (Postgraduate school, 2013; 2018; Institute of Education, 2014; 2018). The twelve disciplines were categorized into four groups- Education, Science, Social sciences and Arts/Law (Table 1). The research methods used as reported in the books and compendiums of abstracts are denoted by QN representing quantitative method; QL for qualitative method and MM for mixed methods approach.

Data Analysis

The data were analyzed using frequencies, percentages and the chi square test of association.

Findings

What proportion of doctoral research in education was conducted using quantitative, qualitative and mixed methods?

Table 1

Summary of methods used in the conduct of doctoral research in education, arts, social sciences and science-based disciplines

Research method/ Discipline	QN		QL		MM		Total	
	N	%	N	%	N	%	N	%
Science-based	169	86.67	10	5.13	16	8.21	195	100.0
Arts/law	4	5.41	50	67.56	20	27.03	74	100.0
Social sciences	12	42.86	8	28.57	8	28.57	28	100.0
Education	64	48.84	21	16.03	46	35.10	131	100.0
Total	249	58.18	89	20.79	90	21.03	428	100.0

From Table 1, out of the 131 abstracts of education doctoral theses reviewed, almost half (48.84%; n=64) adopted the quantitative method, followed by 35.10% (n=46) of those who used the mixed methods and remaining 16.03% (n=21) used the qualitative method. This finding reveals that the most popular method used in researching educational issues is the quantitative method.

What proportion of doctoral research in the social sciences, arts/law and science-based disciplines was conducted using quantitative, qualitative and mixed methods?

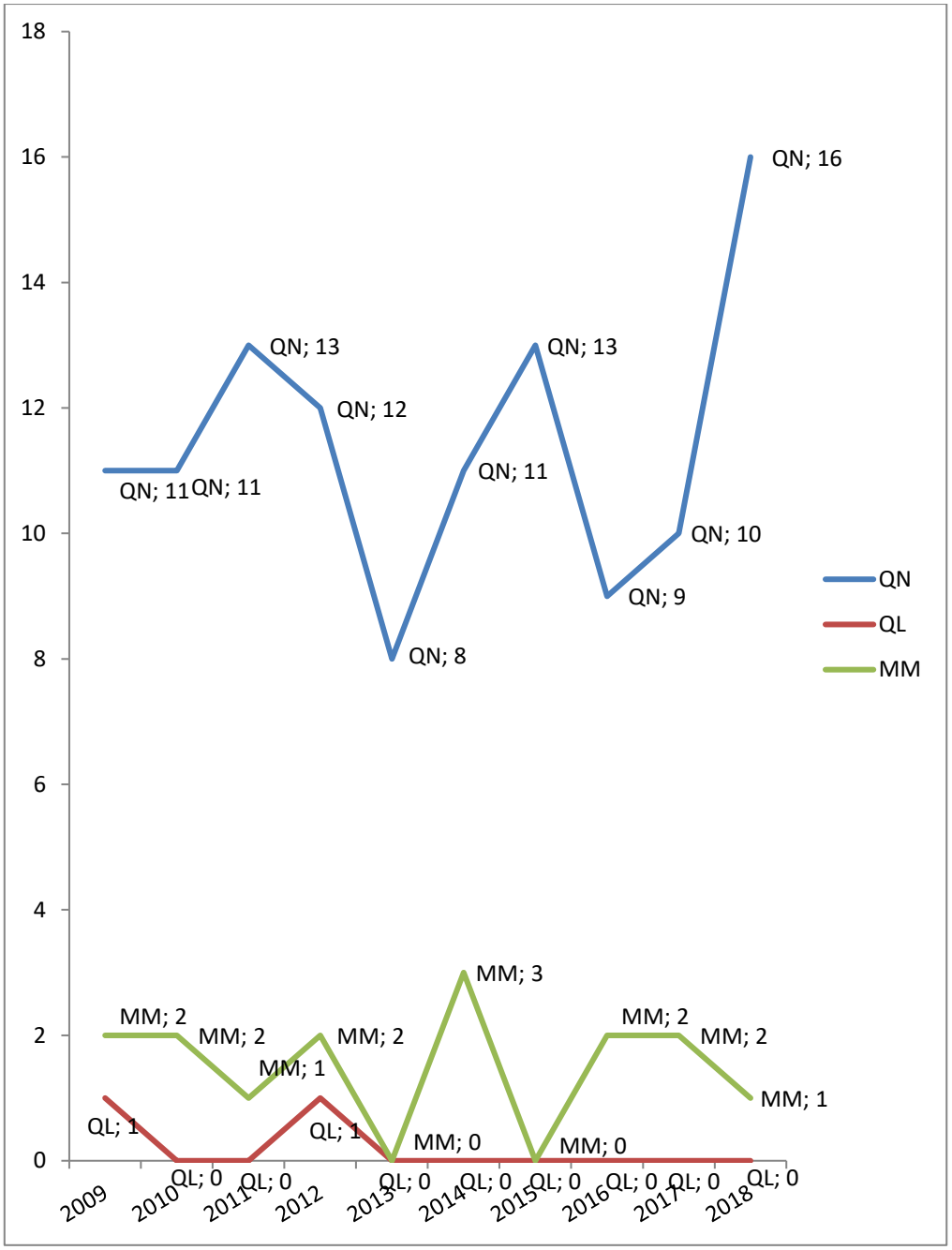
From the science-based disciplines 86.67% (n=169) of the 195 doctoral students adopted the quantitative method, followed by 8.21% (n=16) of candidates who used qualitative approach, while 5.13% (n=10) adopted the mixed methods to implement their doctoral research. The reverse is the case with the liberal arts and law where 67.56 % of the Ph.D. abstracts reviewed (n=50) adopted the qualitative method followed by mixed methods (27.03%; n= 20). Only 5.41% (n=04) of the students in this discipline adopted the quantitative method to execute their Ph.D. research (Table 1).

From the social sciences, the doctoral research was conducted with the use of qualitative and mixed methods shared in equal proportion (28.57%; n=08). The quantitative method appears to be more dominant than the other two methods in the social sciences (42.86%; n=12). Apart from the science-based discipline where the majority of the students employed the quantitative method, education came second, followed by the social sciences, while the quantitative method was least adopted by doctoral students of Arts/law.

What is the trend in the use of quantitative, qualitative and mixed methods to conduct doctoral research in education within the 10 years of 2009-2018?

Trends in the use of quantitative, qualitative and mixed methods approaches

Figure 1



The trends in the use of the three methods within the ten-year period are illustrated by Figure 1. Though, the trend fluctuates within each of the methods throughout the period, clearly, quantitative approach took a clear lead, while the use of the qualitative method is insignificantly low.

There is no statistically significant association between the research methods used by doctoral students in education, the social sciences, science and arts/law and their disciplines.

The independent variable is students' discipline, which was classified as education, sciences,

the social sciences and arts/law, while the dependent variable is research methods grouped as quantitative, qualitative and mixed-methods. A 4 x 3 contingency table comprising 12 cells is formed, highlighting the frequencies (Table 2). The criteria for rejection was set at alpha of .05. The test statistic was done manually.

The degree of freedom is 6, the tabulated value of 12.59 is less than the calculated value of 191.35 at 0.05 (Table 2). Therefore, the hypothesis is rejected. This means that there is significant association between the research methods used by researchers and their disciplines.

Table 2
Chi-square contingency table for research methods by discipline

Research Methods	Education	Science	Social Science	Arts/Law	Total
QN	64 (76.21)*	169 (113.45)*	12 (5.89)*	4 (15.56)*	249
QL	21 (27.24)*	10 (40.55)*	8 (5.82)*	50 (15.39)*	89
MM	46 (27.55)*	16 (41.00)*	8 (16.29)*	20 (43.05)*	90
Total	131	195	28	74	428

*Figures in parenthesis are the expected frequencies.

Discussion

This research assessed the types of research methods used by doctoral students to conduct their research in education. It also compared the methods in education with those used to conduct similar studies in other disciplines grouped as science-based discipline, the social sciences, arts and law.

Findings show that in education almost half of the doctoral researches were conducted using the quantitative method, followed by mixed methods. This is in agreement with Ige and Omilami (2016) who discovered that, in Nigeria, most of the science and mathematics education doctoral students adopted quantitative approaches to conduct their research, while a few adopted the mixed methods. On the other hand, it is contrary to the findings of Nenty (2010) who discovered that qualitative methods are mostly adopted by education graduate students from Botswana University in South Africa. The Nigerian students' preference for the quantitative method is possibly due to its ease of use, and lack of skills in handling qualitative and mixed methods.

The trend observed in education is somehow unexpected. Based on the fact that educational issues could occur in social, economic, historical and political contexts, approaches other than quantitative approach would have served to conduct such studies better. Hence, the expectation is that mixed methods will dominate the approaches used to investigate educational issues. This is in line with the pragmatic philosophy, which believes that human behaviour is not static hence methods to be used to study human behaviour should not be restrictive; rather they should allow researchers to explore and explain the issues (Creswell, 2014) that occur in diverse settings.

Discipline orientation (Nenty, 2009), belief that the quantitative method is superior than the qualitative method (Carey, 1993), and the fact that many of the students do not have a formal training in

the use of qualitative and mixed methods approaches to research (Falaye, 2017) are plausible reasons that can serve to explain the pattern observed in this study.

The dominance of qualitative method in the arts/law is not surprising. It is quite in support of the constructivist worldview (Bogdan & Taylor, 1975; Lincoln & Guba, 1985), which holds that human behaviour is unpredictable; hence, researching human beings in their natural setting and interacting with them to gain more insight into their problems using qualitative methods appear most appropriate.

Further still, another finding that emanates from this research is that the quantitative method is most common in the science-based disciplines. This supports the observations of Adegoke (2016) and Beardslee, Wright, Salt and Drezner (1997). In addition, it is not surprising since it is a discipline where researchers believe in the cause and effect relationship, develop hypotheses and research questions and tight control of variables. Quantitative researchers gather numeric data and employ statistical packages to analyze them. Therefore, the dominance of quantitative method over the two other approaches is expected.

With regard to the association between disciplines and the methods adopted by doctoral research students, there is a statistically significant relation between the methods and the students' disciplines. Therefore, their choice of methods is not due to chance.

Conclusion and Recommendations

The findings in this study reveal that the most popular method used in researching educational issues is the quantitative method. It is also a method of choice in the Sciences, while doctoral students from arts and law relish the use of the qualitative method in their research. The apparent popularity of quantitative method over the qualitative method and mixed methods as established in this study could be traced to the domination of quantitative method for long, the notion that 'if it is not quantitative research it is no research' and inadequate skills in the use of qualitative and mixed-methods among other reasons.

Notwithstanding these findings, the tussle between quantitative and qualitative methods is fast weaning, while the compartmentalization among disciplines is becoming hazy. In the world where inter/multi-disciplinary research is being popularized, it is expedient to provide students with opportunities to access the different research methods and to develop their skills such that they are able and confident to adopt appropriate methods based on their research orientations and the nature of the inquiry. Likewise, lecturers/supervisors are encouraged to develop their skills in areas of research methodology where they are deficient. This will reduce indoctrination by supervisors, improve and ultimately strengthen their competence. The rigor will improve credibility of findings emanating from research conducted in the different disciplines. Also, this study calls for a curriculum review at the university level, where the different research methods are taught either as a stand-alone course or in an integrated form. This gives opportunities to university students to have a balanced view of research methods.

Overall, this study revealed that quantitative approach is most popular among doctoral students. This finding likely and inadvertently promotes the outdated notion of superiority of the quantitative approach over the others. Hence, there is a need to create awareness among researchers, university students and research communities on the values inherent in the three approaches, such that students are free to make an informed choice of which approach to use to conduct their research.

References

Adegoke, B. A. (2016). *Statistical methods for behavioural and social science research.* (3rd ed.). Mokola, Nigeria: Able Arts and Press.

Allen, T. D., Eby, L. T., O'Brien, K. E., & Lentz, E. (2008). The state of mentoring research: A qualitative review of current research methods and future research implications. *Journal of Vocational Behaviour, 73*(3), 343-357.

Babbie, E. (2001). *The practice of social research.* (9th ed.). Belmont, CA: Wadsworth Thomson Learning USA.

Beardslee, W. R., Wright, E. J., Salt, M., & Drezner, K. (1997). Examination of children's responses to two preventive strategies over time. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(2), 196-204.

Bogdan, R. D., & Biklan, S. K. (1982). *Qualitative research for education: An introduction to theory and methods*. Boston: Allyn & Bacon.

Bogdan, R., & Taylor, S. (1975). *Introduction to qualitative research methods.* New York: Wiley.

Carey, J. W. (1993). Linking qualitative and quantitative methods: Integrating cultural factors into public health. *Qualitative Health Research, 3*(3), 298-318.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed method approaches* (4th ed.). Thousand Oaks: CA, Sage.

Denzin, N. K., & Lincoln, Y. S. (Eds.) (2000). *Handbook of qualitative research*. (2nd ed). Thousand Oaks: CA. Sage.

Falaye, F. V. (2018). *Qualitative research and evaluation: Basic issues and methods.* (2nd ed.). Ibadan: University Press, University of Ibadan.

Falaye, F. V. (2017). *Guiding, measuring and valuing through mixed methodology*. An inaugural lecture delivered at the University of Ibadan, Ibadan, Nigeria. Ibadan: University Press, Publishing House, University of Ibadan, Nigeria.

Field, K. (2011, June 14). The importance of research for education's future. *Express and Star Magazine*.

Guba, E. G. (Ed.). (1990). *The paradigm dialogue*. Newbury Park, CA: Sage.

Howe, K., & Eistenhart, M. (1990). Standards for qualitative (and quantitative research): A prolegomenon. *Educational Researcher*, 19(4), 2-9.

Ige, T., & Omilami, N. A. (2016). Making a case for a shift in science education research focus in Nigeria: An examination of doctoral theses from two universities. In C. O. O. Kolawole, *et al* (Eds.). *Education in Nigeria: Looking beyond the 21st century.* A book of reading (pp. 363-383), His Lineage Publishing House, Ibadan, Nigeria.

Institute of Education, (2014). *Handbook of abstracts (2004 - 2013)* I. M. Isiugo-Abanihe & M. M. Osokoya, (Eds.), Ibandan: Research and Publications unit, Institute of Education, University of Ibadan.

Institute of Education, (2018). *Handbook of abstracts (2014 - 2018).* F. V. Falaye & E. O. Babatunde,

(Eds.), Research and Publications unit, Institute of Education, University of Ibadan, Ibadan.

Keeves, J. P. (Ed.). (1988). *Educational research, methodology, and measurement: An international handbook.* Oxford, UK: Pergamon.

King, G., Keohane, R., & Verba, S. (1994). *Designing social inquiry: Scientific inference in qualitative research.* Princeton: Princeton University Press.

Lambert, S. M., & Markel, H. (2000). Making history: Thomas Francis, Jr., M. D., and the 1954 Salk poliomyelitis vaccine field trial. *Archives of Pediatrics and Adolescent Medicine, 154*(5), 512-517.

Lincoln, Y., & Guba. E. G. (1985). *Naturalistic enquiry*. Sage Publications: Thousand Oaks, CA.

Nenty, H. J. (2009). Research orientation and research learning-related behaviour of graduates, *Journal of Social Science*, *19*(1), 9-17.

Nenty, H. J., & Adedoyin, O. O. (2010). Research orientation and research learning-related behaviour of graduate education students at University of Botswana. *Education Research, 1*(11), 577-585.

Neuman, W. L. (2009). *Social research methods: Qualitative and quantitative approaches* (7th ed.). Boston: Allyn & Bacon.

Obanya, P. (2016). Education as learning a living. In C. O. O. Kolawole, *et al* (Eds.). *Education in Nigeria: Looking beyond the 21st century.* A book of reading (pp. 1-81), His Lineage Publishing House, Ibadan, Nigeria.

Patton, M. Q. (2002). *Qualitative research and evaluation methods,* (3rd ed.). Thousand Oaks, California: Sage.

Phillips, M. Q., & Burbules, N. C. (2000). *Post positivism and educational research*. Lanham, MD: Rowman & Littlefield.

Piesterse, M. E., Seydel, E. R., De Vries, H., Mudde, A. N., & Kok, G. J. (2001). Effectiveness of a minimum contact smoking cessation program for Dutch general practitioners: A random controlled trial. *Preventive Medicine, 32*(2), 182-190.

Postgraduate School, (2013). *Compendium of abstracts of Ph.D. theses, (2009-2010), humanities-based disciplines*. In O. Olorunnisola, O. Babalola & I. A. Aderemi, (Eds.), Ibadan: University of Ibadan.

Postgraduate School (2018). *Compendium of abstracts of Ph.D. Theses, (2011-2012), humanities-based disciplines*. In O. Olorunnisola, O. Babalola & I. A. Aderemi, (Eds.), Ibadan: University of Ibadan.

Pyrczak, F. (2003). Evaluating research in academic journals: A practical guide to realistic evaluation (2nd ed.). Los Angeles: Pyrczak Publishing.

Shavelson, R.J. & Towne, L. (Eds.). (2002). *Scientific research in education*. Center for Education, Division of Behavioral and Social Sciences and Education. Washington DC: National Academy Press.

Strauss, A. & Corbin. J. (1998). *Basics of qualitative research*. Thousand Oaks, CA: Sage Publications.

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