Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.5, No.33, 2014

Methodology: A Foundation for a Good Research

Esiere, Owoyi Akaninyene
The Department of Communication Arts,University of Uyo, Uyo
E-Mail: esiereowoyi@gmail.com

Charles Obot, Ph.D
Department of Communication Arts,University Of Uyo, Uyo. Akwa Ibom State, Nigeria
E-Mail: charlesobot2000@yahoo.com

Abstract
Methodology is one aspect of a research procedure that cannot be overlooked. It can make or mar any study. A faulty methodology renders a research work invalid and unreliable while a good one strengthens it. Methodology, like other research components, should be treated with a lot of attention and seriousness. Some researchers however neglect the importance of the right methodology and this robs their study of some validity. This paper therefore focuses on the importance of methodology and the influence it brings to bear on the result of a research. It states the significance of choosing a particular methodology not only because of its attendant advantages but of how best the researcher can achieve the desired result. Methodology, be it qualitative or quantitative, can bring about a result than can be replicated so long as it answers the research questions. The notion that one method is better than the other is far from the truth. They have their strengths and weaknesses and at best complementary. A situation where two appropriate methods are used further enhance the reliability of a research work.

1. INTRODUCTION

Research, whether formal or informal is to serve man and aid him in making his decisions. Man's major problems require research and will continue to make demands for research as man's needs multiply daily. There is no doubt as to how much research has affected man's life in the fields of medicine, technology, physiology, communication and sociology. Research occupies a fundamental position in he sustenance of life on earth. It is used for the production of goods and services for the well being of man. Udoakah adds that research is a serious enterprise that is meant to impact positively on humanity (Udoakah, 2003).

There are some basic attributes a researcher must possess in order to succeed in his endeavour. The researcher must have a definite purpose and pursue it with zeal and passion. When research becomes boring, it has failed halfway because the zeal needed to carry the search through is already lost. The researcher must also employ a serious level of mental precision. He must pay close attention to nuances and subtleties. Little details should never be overlooked.

The crux of this paper, however, is to examine the level of influence that proper methodology wields on good research. It is pertinent here to define what research and methodology are before examining how one affects the other.

This paper would be discussed under the following sub-headings:

- Key Words
- Research: What it is.
- Methodology: The Roadmap to Scientific findings
- Types of Research: Strengths and Weaknesses
- Methodology and Good Research
- Conclusion/Recommendation

2. **Keywords:** Research, Methodology, Qualitative Research and Quantitative Research.

2.1 **Research:** This is the act of search for information or investigating a subject matter or phenomenon systematically and objectively.

2.2 **Methodology:** This refers to the process used in searching for or investigating a subject matter or phenomenon.

2.3 **Qualitative Research:** A study that investigates or documents people's opinion on or about, attitude or reaction towards a subject matter or phenomenon.

2.4 **Quantitative Research:** A study that generates or collects numeral and statistical data.

3. RESEARCH: WHAT IT IS.

Some experts in the field have defined research severally. Research is a process of learning that aims to seek, find and use information effectively and independently. Requiring both creative and critical thinking, research is not a mechanical process. One needs to be prepared to continually modify, expand and refine one's approach.

Research is essentially a spirit of inquiry-looking for the what, why and how. While 'what' is the starting point that provides information, 'why' and 'how' provides the processes, analysis and conclusion.

According to Osuala (1991:1), research is simply the process of arriving at dependable solutions to problems through the planned and systematic collection, analysis and interpretation of data'. He adds that research is an essential tool for advancing knowledge. Reinard (1994:3) defines research as the systematic effort to secure answers to questions. These questions deals with systematic effort to secure answer to questions. These questions deal with issues that require data.

The aim of research is to keep seeking until solutions to problems, enigmas, puzzles and all that holds man to ransom are found. Both Osuala (1991) and Reinard (1994) agree that research is not merely library work, or statistics or field observation. Research is a tested process of gathering information.

Research could also be said to mean, "to search and search again" in order to get what is needed.

Research, from what we have gathered, is hard work that yields testable results. The key words in research are 'planned' and 'systematic' (Okwandu, 2004). Research is systematic because it follows in an orderly manner and what is done orderly is usually planned. Any research work that looses sight of being planned and systematic has already failed.

4. METHODOLOGY: The Roadmap to Scientific findings

Methodology, according to Wikipedia.com, refers to more than a simple set of methods. It refers to the rationale and the philosophical assumptions that underlie a particular study. Methodology is not just a list of research tasks to be undertaken but also a way of showing how this task will help in tackling the problem in the best possible manner. A sound methodology and reliable sources of data are necessary to answer the crucial question; how does one know that the conclusions are valid? Methodology principles are largely discipline-specific and vary depending on the topic of research even within the same discipline. Yet two things can be said about methodological application.

First, the proposal must specify the research operations the applicant will undertake and second the way he/she will interpret the result of these operations in terms of the central problem.

Being specific about activities to be undertaken to collect information-visiting archives and libraries, operating questionnaires, interviewing respondents, using and interpreting statistical data-is important.

The UNESCO Abuja-SSAN publication of 2002 re-echoes Stanley's (1997) position on the importance of methodology:

Methodology is important, methodology matters, because it enables us to ask, and also begins to answer (these) interesting and important questions. This is because a methodology is, at its simplest, a set of linked procedures, which are adopted because they specify how to go about reaching a particular kind of analytic conclusion or goal.

Research that is properly conducted using laid down methods has more validity and reliability than any done haphazardly. A research is almost impossible without adequate methodology. Methodology is the life wire of a good research because it is like a pathway to light. Any attempt at research by not using the right methodology ends in an unreliable work. Methodology is akin to steps taken in cooking a good pot of soup. If the oil is put at the wrong time or the wrong procedure is used, then the soups are likely not to come out tasty. A soup without taste is worthless so is research that lacks proper methodology because the results are neither reliable nor valid.

A researcher uses basically two kinds of methodology to arrive at his research findings. They are the quantitative and qualitative methodologies.

The quantitative and qualitative methodologies both have their strengths and weaknesses. No matter the research method employed, none is superior to the other as the subject of research determines the method to be applied. In some cases, a mixed method is advisable so as to enable to get a more valid result. A thorough recognition of the strengths and weaknesses of the two methodologies will help to apply the method that is best suited for a particular study leading to a more reliable and valid research result.

5. TYPES OF RESEARCH METHODOLOGY

5.1 QUALITATIVE METHODOLOGY

Cresswell (cited in Leedy 1997:104) defined a qualitative study as 'inquiry' process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants and conducted in a natural setting'.

Qualitative methodology is a category of research design that elicit verbal, visual, tactile, olfactory data in the form of descriptive narratives like field notes, recordings, transactions from radio, television and other written records (Preissle: 2002). Miles and Huberman (1994) confirm that qualitative methodology in research involves analysis of data such as words, pictures or objects.

The qualitative method of research is exploratory and detailed, requiring personal touch in a natural setting. This type of research is typically used to answer questions about the nature of the phenomena with the

purpose of describing and understanding them from the participants' point of view. This means that qualitative method studies things in their natural setting, attempting to make sense or interpret phenomena in terms of the meaning people give to them.

The UNESCO Abuja-SSAN publication of 2002 describes qualitative methodology as a range of research techniques using unstructured form of data collection and that it is sufficiently equipped to study the process of social life.

Methods of qualitative research include participant observation research, focus group discussion, documentary sources, interviews, case studies, case histories etc. All of these methods have their strengths and weaknesses. However, researchers often combine more than one of the methods to be able to obtain validity and reliability.

MERITS OF QUALITATIVE METHODOLOGY

- Qualitative research achieves a greater level of depth and details.
- Qualitative methods leave room for openness and this can generate new theories as participants discuss issues that are important to them.
- It is easier for a participant to reveal more when discussing issues than when he/she has to answer preset/closed questions.
- No matter how open-ended a question is in quantitative methods, it never leaves enough room for proper unfettered discussion. Kruger (2003) reiterates this, 'it certainly seems reasonable to suggest that one may have a better understanding of a community member's situation by reading a descriptive passage than just looking at demographic statistics'.
- In observing participants, certain attitudes and behaviours can be revealed.

DEMERITS OF QUALITATIVE METHODOLOGY

- Openness and greater interaction with the subjects may be counter productive in the sense that some of them may feel very uncomfortably with the researcher's physically appearance, age, race, gender, dress, nonverbal behaviour and comments and this may prompt respondents to answer questions untruthfully are under duress.
- Fewer subjects tend to be studied and this makes the study more difficult to generalise.
- Quantitative results, O'Neill (2005) are more difficult to aggregate and make systematic comparisons.
- It is difficult to replicate such results because of the lack of standard procedure that is available in the qualitative methods.

5.2 QUANTITATIVE METHODOLOGY

Quantitative research is defined as the collection and analysis of numeral and statistical data. It is perceived as the scientific approach to research employing survey, experimental and quasi-experimental strategies. Harvey (cited in O'Neil, 2005) describes quantitative data as:

> *Data which can be sorted, classified, measure in a strictly objective way-they are capable of being accurately described by a set of rules or formulae or strict procedures, which then make their definition and interpretation unambiguous and independent of individual judgements.*

Creswell as cited by Leedy (1997) defines quantitative methodology as

> An inquiry into social and human problems, based on testing a theory composed of variables, measured with numbers and analysed with statistical procedures in order to determine whether the predictive generalizations of the theory hold true.

MERITS OF QUANTITATIVE METHODOLOGY

- Quantitative methods are ideally suited for finding out who, what, when and where of research questions.
- Questions are direct and easily quantified and made available to a substantial sample size so as to get proper representation.
- With Quantitative analysis, issues are known at the beginning of the research project, and this helps in deciding questions.
- Kruger (2003) confirms that "quantitative methods allow us to summarise vast sources of information and facilitate comparisons across categories and overtime"
- The researcher's role in quantitative method is that of detachment and impartiality.
- Quantitative methods apply standard procedures and an objective portrayal of the results ensures validity and reliability.
- Quantitative data is more efficient and able to test hypotheses.
- Studies can be repeated and compared with similar studies and the end results are almost alike.

DEMERITS OF QUANTITATIVE METHODOLOGY

- In quantitative methods, answers could be preset and this does not necessarily reflect their true feelings.
- The quantitative method can be quite complex and requires considerable investments for proper understanding and use. Kruger (2003).
- Results from quantitative methods, according to O'Neil (2005) are numeral descriptions rather than detailed narrative and generally provide less elaborate accounts of human perception.
- Quantitative methods are inappropriate for behavioural data as they may miss contextual details.
- Kruger (2003) adds that it can be difficult to get the real meaning of an issue by looking at numbers.
- Kruger (2003) also warns that people could turn out elaborate statistics, creating difficulties in the utilization of the products of research.
- The development of standard questions, according to O'Neil (2005), can lead to bias and false representation.

6. METHODOLOGY AND GOOD RESEARCH

Validity and reliability are very important to any research study. Validity is the ability a research or instrument to actually measure what it set out to measure. Reliability of a study or instrument refers to it ability to produce the same result at different point in time. To be able to attain this all-necessary aspect of any research work, the approach used determines the result of the research. The two broad line approaches earlier discussed could be used in planning the best approach in conducting research. A research approach that is cumbersome and very expensive could get very discouraging and might just cause the searcher to give up on the proper approach. He may not want to waste all the time and energy spent so far and that might cause him to cut corners.

A research study done without proper laid down procedures will lack any form of validity. The topic of the research will always determine the proper method to use as it does every other aspect of the study. The methodology employed should be the one that clearly and best provides validity and reliability for a study rather than on the strength of its advantage and disadvantage.

According to Wimmer and Dominick (2003), every procedure in a study should be considered from the standpoint of the parsimony principle, or Occam's razor'. The principle states that 'a person should not increase, beyond what is necessary, the number of entities required to explain anything or to make more assumptions than the minimum needed'.

This principle holds true, as any attempt to carry on more than is necessary will eventually make a work invalid. The simplest of appropriate approaches will give a more valid result and most likely to be replicated than those involved in cumbersome methods.

A classical example of a study as stated in Wimmer and Dominic (2003) points to the fact that methodology is important in research. Wimmer and Dominic (2003) quote Lemish (1987) as having carried out a research on television viewing habits of infants and toddlers. Research visited 16 families and observed the viewing behaviour of infants between a 1-2 hour periods. Similarly, Wimmer and Dominic (2003) also quote Moriarty and Everett (1994) as having conducted a study where researchers observed family members watching television and had to record their behaviours on a moment-to-moment basis.

In the examples stated above, observation which is a qualitative research method is the best approach as children may lack the reading or verbal skills necessary to respond to a questionnaire concerning their television viewing habits (Wimmer and Dominic: 2003) . Such data cannot be gathered using a quantitative method. If the wrong method were applied, the result of the research will not be as valid as applying the right method.

There are certain situations that may demand for triangulation, but under no circumstances should an easy route be taken under the pretext of undertaken a research study.

7. CONCLUSION

In undertaking research, the methodology is the foundation. Once the methodology is wrong then the result will not be valid or reliable. The aim of the research in the first place is to serve human needs and unreliability cannot be condoned in research. The study to be undertaken determines the methodology to be employed. No one methodology is superior to the other as each can gather some useful data. Both of them can provide invaluable contributions to knowledge that is in the best interest of mankind.

8. RECOMMENDATION

A strong recommendation however is the use of a mixed method, which is known as triangulation, Amaratunga, et al cited in O'Neill (2005) states that there is a strong suggestion within the research community that research, quantitative and qualitative, is best thought of as complementary and should therefore be mixed in research of many kinds.

Das (1983) adds that:

> ...qualitative and quantitative methodologies are not antithetic or divergent; rather they focus on the different dimensions of the sane phenomenon. Sometimes, these dimensions may appear to be confluent: but even these instances, where they apparently diverge, the underlying unity may become visible on deeper penetration... The situational contingencies and objectives of the researcher would seem to play a decisive role in the design and execution of the study...

This way the researcher can take advantage of the underlying strengths of each method and gather more information. A process of triangulation will strengthen the validity and reliability of a research. Any findings or conclusion using the process of triangulation will be more convincing and accurate, as the data would have been gathered using different methods and analytical tools. In a sentence, methodology is a good foundation for research.

REFERENCES

Das, T. H. (1983). 'Qualitative research in Organization behaviour'. J*ournal of Management Studies*, 20(3), pp. 311. Available: www.roboniell.com , retrieved Sept. 1, 2014.

Kruger, D. J. (2003). 'Integrating Quantitative and Qualitative Methods in Community Research', *The Community Psychologist*, 36, pp 18-19. Available: http/www.personal.umich.edu, retrieved Sept. 1, 2014.

Leedy, L. (1997). 'Research Design and Methodology'. Available: http//www.dspace. stir.ac.uk, retrieved Sept. 1, 2014.

Miles, M. D. and A. M. Huberman (1994). 'Qualitative Data Analysis'. Available: http/www.rasch.org/rmt, retrieved Sept. 1, 2014.

O'Neill, R. (2005). 'Advantages and Disadvantages of Quantitative and Qualitative Methodology'. Available: www.roboniell.com, retrieved Sept. 1, 2014.

Osuala, E. C. (1991). *Introduction to Research Methodology.* Onitsha; Sciences FEP.

Okwandu, G. A. (2004). *Research Methods in Business and Social Sciences*. Owerri; Civincs Publishers.

Preissle, J. (2002). 'Qualitative Research Methods'. Available: http://www.don.ratcliff. net/qual/exp/q1html, retrieved Sept. 1, 2014.

Reinard, J. C. (1994). *Introduction to Communication Research*. Iowa: Brown and Benchmark.

Udoakah, N. (2003). 'Research Ethics in Communication Studies and Social Science in Nigeria, Ethics in Higher Education in Nigeria', A Publication of Social Science Academy of Nigeria, pp 124.

UNESCO (2002). *Interdisciplinary Methodologies in the Social Sciences.* Abuja: SSAN

Wimmer, R. D. and J. R. Dominick (2003). Mass *Media Research: An Introduction* (7th ed.) Belmont: Wadsworth Publishing Company. www.wikipedia.com

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar