

# Research Methodologies: Qualitative Quantitative and Mixed Research Method in Social Sciences

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**Abstract:** This article discussed the research methodologies used in social sciences by students, researchers, and lectures. It looked at the qualitative method, quantitative method, and the mixed-method approaches in social sciences researches. The components of each methodology were discussed, including the data collection methods, and ethical issues (Ethical approval form, consent form, voluntary participation form). The article also assessed the overview of the methodologies which help increase knowledge of the facts in the researches. Furthermore, main objectives of conducting research and research motivating factors were also elaborated. The study recommends that teachers should help students' choose the best research methodology for their research and the researchers should read different types of research methodology to know which one best fits their study. We conclude that this paper gives more understanding of quantitative research, qualitative research and mixed research methods approach in researching and it helps understand the various ground root of the methodological framework and which one best fit the kind of research and at what time.

**Keywords—** Qualitative Research, Quantitative Research, Mixed Method Research, Social Sciences

## 1. INTRODUCTION

Research involves the collection of data, organization of the data, and analysis of the data to increase our knowledge and understanding of issues or a topic. Generally, research has three stages: 1. posing a question. 2. Collect data or information to answer the question, and 3. Present relevant answer to the question. Research is not limited to only science and technology but rather to wider areas of researches in different disciplines like Finance, Banking, management, Marketing, Human Resource, project management, and public relations. No matter the subject area, the research has to be interesting, diligent, active, and must involve systematic processes of inquiry to discover, interpret events, behaviors, facts, and theories. The study of Creswell (2003), indicated that researchers need to concentrate on three (3) methods of Researches when conducting researches in social sciences especially in the business research: Quantitative approach, Qualitative approach, and mixed-method approaches. He concluded that 'the first has been in existence to the social, and human scientist for several years, while the second has begun mainly during the last 3 or 4 decades ago, finally, the last is new and still developing in its form. Both research methods are fashionable and up to date depending on what the research intends to achieve, the kind of questions, the design of the questionnaire or interview guide, and the type of respondents or participants. Some researchers and authors are of the view that quantitative research is more fashionable or stylish because it deals with describing an event using numbers, tables, frequencies, percentages, histograms, graphs, pie charts, bar charts, and many more. Also, it describes that they are in the form of figures which support a hypothesis and predication modal. The qualitative method

enables the researchers to use texts for justifying their results, findings, and describing the quality of the subject, providing mental pictures from the researchers' point of view. The mixed-methods which includes both qualitative and quantitative data by mixing them for the improvement of existing measures. This type of method involves collecting and analyzing quantitative and qualitative data that involves the use of questionnaires, interview guides, and focus group interviews. The focus of this article is to explain all the three methods, their advantages, and disadvantages, their differences, Usages, and analysis for research to select which one best suits their interest and area of study. All three methods were applied to my research in Business Administration and both were relevant to me. I tried to apply the concepts from the key consideration in my research approach by relating the methods to my philosophy or viewpoint of business research.

### 1.1 The Objectives of Conducting a Research

The main objectives of conducting researches include:

- ❖ Research help to discover new evidence and facts
- ❖ It helps to examine, verify, and to test important facts and figures
- ❖ The development of new systematic or scientific instruments, concepts, facts, and theories to help solve issues and understand both scientific & non-scientific related problems.
- ❖ Research helps students find solutions to scientific & nonscientific, social, and other problems or related issues.
- ❖ It helps overcome or in solving the problems occurring in our life every day.

### 1.2 What Motivates People to Conduct Research?

There is a reason for everything and likewise, there is a reason for doing research or what motivates the researcher, students, or professionals to make research. Among the motivating factors are:

- ❖ To be awarded a degree (BSc. MSc. M.Phil., and Ph.D.)
- ❖ To get benefits like better job/employment, a promotion at the workplace, salary increment.
- ❖ To get a befitting job like a teaching position in university, college or in a research institution
- ❖ To become a senior researcher and research position internationally. Example in countries such as Australia, Canada, England, Germany, Japan, U.S.A to boost your research career.
- ❖ Research helps to solve the unsolved problems and other challenging issues
- ❖ To get delighted, happiness, joy and loving what you doing and doing creative work
- ❖ Research allows the research to acquire some level of respectability
- ❖ It gives recognition, credit, appreciation and or acknowledgment to the individual
- ❖ Research help to find out the hidden and unhidden facts of an event or incident.
- ❖ It gives the researcher interest and curiosity to find new ways of doing things
- ❖ Researches help to serve society by solving societal problems.

## **2. RESEARCH METHODOLOGIES**

### **2.1 Quantitative Research Method**

A quantitative research method is a collection or gathering of numerical data that can easily be transformed into statistics and taken into consideration. DeFranco (2011, para 3) mentions that a quantitative approach to research is used to quantify views, attitudes, behavior, opinions, and some other defined variables. The results generalize from a larger population sample, and also, measurable data to help formulate facts, evidence and to uncover other research patterns. Playing with numbers by researchers means that, the researcher has a very good knowledge of standard deviations, correlations, and calculations interpretations. In this method, the data collections are done through several forms like online survey or paper survey, mobile survey, or kiosk survey even sometimes face-to-face interviews, the online and telephone interviews all are also considered as a part of the data collection. Creswell (2003) also mentions that knowledge is a hypothetical complete truth that, can never be found (p. 7). That is, the evidence established in the researches is always imperfect & fallible. The benefits of this type of research allow scientists to be able to conduct a broad depth of research with an accurate result and because the information is straightforward, it easily compares results amongst other data. On the other hand, the disadvantage of

this research method is that researchers need to have access to the populace which can be time-consuming and costly most of the time. Personal information/data can leak affecting a higher risk of biases, so the questions that are defined for an in-depth study need to short with no probing questions.

### **2.2 Qualitative Research Method**

DeFranzo (2011) concluded that this research approach is used in gaining an understanding of the underlying views, reasons, opinions, and motivations via providing insights into the problem or through helping to develop good ideas and hypotheses for potential quantitative research. Simply defined, the qualitative research method is a method of observation and thoughts that is gathered through a non-numerical data. This type of research approach includes the various methods of data collection through interview guides, case studies, focus group discussions with participation/respondents, and observation. This type of research methods has a quality that, it covers various issue as well as topics in-depth and in details plus data is very powerful as it is made up of human experiences rather than the quantitative research approach. Usually, the research in these types of research has a clear mission and vision on what it is to be expected as a framework of the work and can be reviewed quickly with fresh information. But everything that comes will be disadvantaged, here the quality depends on the knowledge and skills of the researcher so there is some level of dependency. It could also be time-consuming and difficult to assess. Creswell (2003) also discussed the process of qualitative research and is very largely inductive, with the inquirer generating meaning from the data/information collected from the field (p.9). These types of research methods are at times not accepted within scientific communities' settings especially.

### **2.3 Mixed Research Method**

The mixed research Method was discussed by mixing research methods that are relatively new and are still under development. The combined research is a type of research method used in carrying out researches that involve data collecting, the analyzes of the data, and integrating both methods in researches. The combination of both methods of research gives the readers and researchers a fair and good understanding of the thesis problems, objectives, and questions of the research than when using only one methodology. FoodRisc Resource Centre (n.a.) define the Mixed research method as a methodology for conducting of research that involves the collection, analyzing, interpreting, and integrating quantitative data (e.g., experiments, surveys) and the qualitative data (e.g., focus groups discussions, interviews guides) researches. This research approach is used when the integration provides a better view and understanding of the research problem or research gap than either of the approaches alone. This kind of research approach provides a bigger comprehensive understanding of the problem of the research in detail rather than focusing on only a quantitative approach or qualitative approach

individually and it balances the weaknesses of the two methods both, but the design of these researches can be very complicated. This research method takes a lot of time and resources due to its nature and the process of combining and analyzing all the two methods.

It is not very easy by planning and implementing one research method by drawing the findings of each, which is noted from other researches. These methods can only be suggested to be used where the understanding of the phenomenon complexity that plays a great significance to the researcher. Sometimes it is unclear how the discrepancies of the two types of research can be resolved when it occurs during investigating the findings, especially when collecting qualitative data followed by quantitative data.

**2.4 Quantitative, Qualitative and Mixed Research Methods**

Creswell (2014) suggested the below research designs that the above research approaches tend to use:

**Table 1.3 Quantitative, Mixed, and Qualitative Methods**

Quantitative Methods	Mixed Methods	Qualitative Methods
Pre-determined	Both predetermined and emerging methods	Emerging methods
Instrument based questions	Both open- and closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, and census data	Multiple forms of data drawing on all possibilities	Interview data, observation data, document data, and audiovisual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretation

Source: Creswell, 2014, p.45.

**3. RESEARCH PARADIGMS**

When the focus of a particular study is decided by the research, the type of paradigm to be used must also be decided. A paradigm is defined as a type of view that defines how research should be done and what is acceptable in that research (Bertram & Christiansen, 2014). Broadly, there are 2 main types of research paradigms/philosophies, namely: positivist and, phenomenological. The positivist paradigm is the quantitative method and the phenomenological paradigm is the qualitative approach (Collins & Hussey, 2003).

**3.1 The Positivist Approach**

The "Positivist (Quantitative) research method is a type of conclusive research that involves large Samples and representations that are mostly structured into data collection

procedures" (Struwig & Stead, 2001). The approach of this research involves looking at the quantities of variables which consist of more variables or just one variable and also measuring those variables. The measurement is done using measures of psychological behavior/characteristics like questionnaires, tests, & scales rating (Leedy & Ormrod, 2010). The primary objective of a positivist paradigm is to test hypotheses. According to Struwig & Stead (2001), the positivist approach is objective because it pursues the facts/causes a social phenomenon which does not pay much attention to the subjective thinking or state of the individuals involved but rather applies to the logical reasoning of the research to reach conclusions that are objective to a research problem. Lancaster (2005) indicated that quantitative research methods are an application to the only phenomenon that can be measured or quantified. Quantitative research methods data are collected through questionnaires, and the collected data analysis using statistical techniques, and later interpreted for conclusions to be made from the findings.

**3.2 Phenomenological Approach**

Qualitative research is also referred to as a phenomenological research approach to researches which is concerned with the understanding of the behavior of humans from the person's frame of reference. The phenomenological approach does not focus on the measurement of social phenomena rather focuses on meaning. It seeks to describe, narrate, translate, transcribe, and come to terms with the meaning almost occurring naturally to the social phenomenon and uses methods of research that are interpretative (Collis & Hussey, 2003). The researcher cannot be objective in qualitative research since he or she is part of the reality that is being tested. The qualitative approach/method or the phenomenological approach is associated with many methods of researches like post-modernism, phenomenology, ethnography, and ecological psychology.

**3.3 Qualitative Research Paradigms against Quantitative Research Paradigms**

Generally, research methods can be divided into two different broad methods. That is the quantitative method and the qualitative method (Cavanna, et al., 2001). These two methods have different approaches and procedures. The differences between quantitative paradigm/research & qualitative paradigm/research methods are summarized in the below table:

**3.4 The differences Between Qualitative Research Method and Quantitative Research Method**

Qualitative research differs from quantitative methods. As the quantitative research deals with numeric like figures, frequencies, percentages, qualitative deals with the qualitative characteristics of the research and data. The below table explained these in details:

<b>QUANTITATIVE &amp; QUALITATIVE DIFFERENCES</b>	
1	Focus on quantity (how) Focused on quality

	much, numbers)	(features)
2	Positivism	Phenomenology
3	Experiments/Correlation	Ethnography / Observation
4	Prediction, test hypothesis	Understand, meaning
5	Structured, predetermined	Flexible, emerging
6	Large, random, representation	Small, purposeful
7	Questionnaire, scales, tests, inventories are used in data collection.	Interviews, Observation, documents and artifacts
8	Analysis is based on deductive (by statistical methods).	Inductive ( by the research)
9	Findings are based on numerical and precise	Comprehensive, description detailed, holistic

Source Ussif, (2019)

#### 4. RESEARCH

##### 4.1 Research Design

Research design is a general route/roadmap of how research questions were answered. Kothari (2008) describes a sample as a collection of units chosen from the universe to represent it and further points out that a good sample population should be 10% to 30% of the entire population. In the book of Saunders et al, (2008) about Research Methods & Business Students in the 5th edition, they indicated that three (3) kinds of research design exist: descriptive research, exploratory research, and explanatory research.

The descriptive research seeks to portray person profiles, situations, and events (Robson, 2002) while, an exploratory study is a way of investigating what is happening, seeking new insights, questions asking, and also assessing a phenomenon in a new way' (Robson 2002). The explanatory study, on the other hand, tries to establish a causal relationship among and between other variables (Saunders et al 2009).

##### 4.2 Sources of Data

There are mainly two sources of data: The primary sources of data and the secondary source of data in generating valuable and relevant information for any research.

##### 4.2.1 The Primary Sources of Data

The primary source of data is a kind of information that is original and direct from the respondents. There are no distortions whatsoever from the views and ideas of the respondents. The type of data collected from fieldwork

surveys with questionnaires, interview guides or focus group discussions.

##### 4.2.2 Secondary Sources of Data

The type of data which already exists, collected for researches and other purposes is secondary data.

##### 4.3 The Population Target

A research population is a total number of items or units that are under investigation of which all the other possible observations are made (Kumekpor, 2002). Saunders et al, (2009) in their book of research methodology emphasize that Sampling saves a lot of time and is an important consideration when there is a deadline in a particular study. They also argued that, the fewer people are involved, the more it is manageable with the organization of the data collected and that, with fewer data to capture, the results of the study from the findings will be readily available easily.

##### 4.4 Sample Size

This shows a particular number of respondents who have been chosen among a population to serves as a representative of the population to be sampled from. Saunders et al (2009) pointed out that with regards to the confidence level and the margin of error is largely considered in the selection of sample size. Stutule (2003) also believed that, for statistical data, a minimum of 30 respondents is more than enough as a representation of the population.

##### 4.5 Sampling Techniques

The technique of sampling is of two types: probability sampling which is also called a representative sampling and the second one is non-probability sampling also referred to as judgmental sampling (Saunders et al., 2009). With regards to the selection of respondents for the conduct of this survey, the study employed purposive and convenient sampling techniques. Convenient sampling which is also called the judgment sampling includes the selection of the samples haphazardly the interviewees who are very easy for data to be obtained from them for the sample since the process of the sample selection continues up to the time that the needed sample size realized (Saunders et al 2009).

#### 5. SURVEYS RESEARCH

Survey research is defined as a brief interview or discussion with an individual or individuals about a specific topic. The term survey is often used to mean collect information or data. Surveys are common methods use to gather data. The surveys are of different types.

##### 5.1 Key Features of Survey Research

Survey research has two key features. The questionnaire and sampling.

1. Questionnaires: Are a series of questions that are predefined and are used in collecting data or information from respondents, interviewees/individuals.
2. Sampling: is a technique or method of selecting from a subgroup of the population for them to answer the questions of the survey, the data/information that is collected from the fieldwork (sample size ) can be generalized as a population of interest of the overall research.

##### 5.2 Modes of Survey Data Collection



Four (4) kinds of surveys are used in the research of any type. Either one type is used, or two or more types. These include:

- ❖ Surveys that are face-to-face
- ❖ Surveys through the Telephone
- ❖ Surveys that are self-administered with paper and pencil or pen
- ❖ Surveys that are self-administered with a computer. This type is typically online.

#### **4.3 The Questionnaires**

Questionnaires help researchers to collect data or gather information on the opinions, behaviors, challenges, impacts, knowledge, facts, attitudes, and some other related information from respondents. Through a questionnaire, the reliability and validity of a known through the measurement of consistency and accuracy of the research instruments used. Firstly, the steps involved in questionnaire development and testing were discussed, and secondly, it describes the validity and reliability of a questionnaire used in this research.

##### **Development of a Questionnaire (Steps)**

Before one develops a questionnaire for any data collection, the person has to identify the goals/objectives of the questionnaire. What kind of information does the researcher want to gather with your questionnaire? Choose your question type or types, develop questions for your questionnaire, restrict the length of your questionnaire, identify your target demographic, and ensure you can protect privacy. There are five (5) main steps in developing a questionnaire for research. These are:

- ❖ The Background of the questionnaire
- ❖ Conceptualization of the questionnaire
- ❖ Questionnaire formatting and data analysis
- ❖ Establishing the validity of the questionnaire
- ❖ Establishing the reliability of the questionnaire

##### **Ethical Issues and Considerations in the Research**

In researches of all kinds, ethical issues and considerations are very important. A study must take the ethics and welfare of the respondents into consideration. The student or researcher conducting the research should be introduced by the institution through an introductory letter given and an identity card. Also, an informed consent letter should be given to the respondents which are signed in the name of the institution and given to the researcher for confirmation by the respondents and a voluntary participation form also to indicate the participants' discretion of participation or not and can end the interview the time they wish. The research should be written following the institution's ethical guidelines, rules, and principles.

The principles of a Research Ethics in most researches are five in number and these include,

- ❖ Obtaining the informed consent of the respondent/participant.
- ❖ Minimizing the involved risk of harm to participants

- ❖ Protecting the anonymity and confidentiality of the participants.
- ❖ The researcher avoiding deceptive practices
- ❖ Providing the respondents with the freedom to withdraw any time they desire from the research.

Below are the steps are taken to ensure full ethical considerations in the research by conducting risk-free research:

#### **5.2 Ethics of Survey Research**

The ethics of survey research is informed consent and confidentiality. For survey research to be successful, the researcher must obey the ethics involved. The respondents' or interviewees' consent must be taken into consideration. They must be informed and their consent was given before either by signing or word of mouth before the interview conducted.

##### **5.2.1 The Ethical Clearance Form:**

The Ethical clearance letter given by the institutions' ethical clearance committee members should be an authentic one. For example, due to ethical issues, the university also can offer an ethical clearance form or ethical approval letter to the researcher to be issued to be respondents for them to read and understand before the conduct of the interview.

##### **5.2.2 Respondents Informed Consent**

The respondent informed consent must be taken into consideration. It is a voluntary agreement for the interviewee to participate in the research collection of data. The main purpose of respondents' informed consent for the protection of the respondents. An individual cannot be forced to have any kind of interview without the consent of the person. There should always be consent before the interview. It is the responsibility of the researcher to educate the participants concerning the purpose of the study, the aims and objectives, the processes and procedures, the risk involved, and the benefits or expected outcome of the study. Then, their consent would be obtained before engaging them in the research. Participation in the research is willingly by the respondent and not compulsory. An example is the institutional review board (IRB Form).

This research is going to be used for academic purposes and the information or data to be collected will be used strictly for Ph.D. thesis and after, all information collected from respondents would be discarded.

##### **5.2.3 Respondents Voluntary Participation Form**

In researches, there should be voluntary participation by respondents. This is the willingness to participate in the research. The participant should have a free will to decide whether or not to participate in the data collection or information provision. The right of the respondents is been protected by international laws, national laws, regional laws, and scientific communities through the codes of conduct. Example: The respondents should be informed that participation in the research is not compulsory and they can end/stop the interview any time they wish and

they can decide not to answer questions that they are not comfortable with.

#### **5.2.4 An Introductory Letter**

The researcher's institution can offer the researcher with an introductory letter which will indicate that, the person works there. Most respondents want to confirm the researcher's identity before participating in the research. Example: The University or the Institution the researcher is working for can offer an introductory letter to the researcher introducing him/her to the participants that the researcher as a student of the university or staff of the institution including a consent form to be read and signed by both the interviewer and the interviewees before the interview if the respondent is willing to do so.

#### **5.2.5 Research Confidentiality**

Confidentiality: the respondents must also be assured of the confidentiality of the research. Good research is the one that has been able to protect the information provided by the participants from unauthorized access, disclosure to the third party, usage, misuse, loss or damage, theft, modification. There should be the fulfillment of the promise, ethical duty, trust, and strong confidentiality assurance and the trust relationship between the participants and the researcher not to disclose responses, the information given, and identity to any other person except use for the research project. The necessary information you would be providing, all will remain confidential. No third party would have access to it. To assure you of more confidentiality, you will be made to give a pseudonym name to be used instead of your real name. All the materials of the research will be saved in a password-protected computer. Violation or breach of confidentiality and ethics happens when the information provided to the researcher is disclosed to a third party without the consent of the participant. This attracts punishment if the breach is intentional. Confidentiality and trust are built in this research between the participants and the research.

#### **5.3 Pre testing / Piloting of Questionnaires**

Pretesting of the questionnaires should be done before the actual data collection. This will enable the researcher to identify the mistakes and errors in the questionnaire to do the necessary correction before the main work done. Errors concerning the sentence structure, meanings, and wording are all identifying and rectified. This makes the questionnaire a user-friendly one for the respondents to easily respond. Before the large questionnaires were printed out, the few ones were tested on some few institutions and the necessary corrections and amendments done before printing in large quantities for the main data collections in the various Regions. It is very important to pre-test questionnaires before the main data collection. (Bryman and Bell, 2007; Cooper and Schindler, 2008; Saunders et al, 2012). The researcher should pretest the questionnaires and modified them before the execution of the survey. During the pilot test, a few samples of respondents who are not the actual respondent but have

knowledge of the subject matter must be interviewed. These sample respondents should be selected conveniently from the institutions or community you will be conducting the interview but are not part of the actual respondent or research. Walliman (2011) indicated that the best method of pretesting is to test the designed tools or instruments with individuals who have relative expertise and knowledge in the field you are studying to foresee any error or source of confusion. Pre-testing is done to know how appropriate and useful the designed instruments are and again check the understanding of the respondents about the questions. After the pre-testing, the main data collection can begin after the necessary corrections and consistency checking of the questionnaires, and the interview guide was made by the researcher.

### **6. DATA ANALYSIS**

Analysis of data is referred to the process of scrutinizing, cleaning, changing or transforming, and modeling the data with the main goal of discovering valuable and useful information, informing summary, conclusions, and supporting the decision-making. Data analysis has several features and methods & approaches, comprising different techniques under a variety of names, used in diverse social science, and business domains. In the recent business world, analysis of data plays a vital role in decisions making more scientific and again helping businesses to operate more effectively and efficiently. This paper discussed three different types of data analysis namely:

- ❖ Thematic Analysis
- ❖ Content Analysis (Conventional Content Analysis and Direct Content Analysis),
- ❖ Descriptive Analysis

#### **6.1 Thematic Analysis**

Thematic analysis is one of the best methods in analyzing qualitative data. Braun and Clarke (2006) concluded that, is the method of recognizing/identifying, analyzing, discussing, reporting, and interpreting patterns/themes in particular data. This is widely used and accepted methods of analyzing qualitative researches. This type of analysis is used in a step by step manner. There are 6 steps in conducting Thematic Analysis as stated by Braun and Clarke (2006). These steps include:

- ❖ Data familiarization.
- ❖ Assigning codes to the data to describe the content.
- ❖ Searching for themes/patterns in the codes from different interviews
- ❖ Reviewing of the patterns/themes.
- ❖ Defining and naming the themes/patterns.
- ❖ Producing a report.

The above steps as indicated by Braun and Clarke (2006) was followed for the analysis of the qualitative studies of this thesis. That is after gathering the data from Ghana, the information was written, transcribed, coded, narrated, reviewed and the final report was written.

## 6.2 Content Analysis

Content Analysis is a method of data collection and analysis whereby some form of data, pattern, or communications are studied systematically. It is also a process or procedure used for the classification of verbal data or behavioral data for categorization/classification, analyzing, summarization, and tabulation of the results. Content Analysis is used to analyze and study the cause and effect relation and is a mixture of both qualitative methods of research and quantitative researches. Thus, the intersection of qualitative methods and quantitative methods. The root and origin of content analysis are more quantitative than qualitative with the counting of words or codes. The content is analyzed in two ways: Descriptive and interpretative. The descriptive answers the question, what is the data? While the interpretative answers, what is meant by the data?

Content Analysis is used in determining the presence of certain themes or patterns, characters, words, phrases, or sentences within a particular text or group of texts to quantify this presence accurately. According to Neuman (2011), there are 6 steps in conducting content analysis in researches. The step includes:

- ❖ Research question formulation.
- ❖ The decision on the unit of analysis.
- ❖ Sampling plan development.
- ❖ Construction of coding types/categories.
- ❖ Checking the reliability of coding and the inter-coder.
- ❖ Collection of data and data analysis.

With the conventional content analysis, the coding categories were directly from the data text. While in the direct content analysis, the relevant findings of the research/study or the theories are what the analysis begins with initial codes as the guidance.

## 6.3 Descriptive Analysis

In conducting a statistical analysis, the very first step is descriptive analysis. The descriptive analysis gives you an idea of the data distribution. They are also used to describe or explain the basic features of data in particular research. Descriptive statistics helps in providing summaries about the sample of the study and the measures. The basis of all quantitative analytical data is formed with simple graphics and other diagrams analysis. Also, Descriptive analysis helps the researcher to detect or realize outliers/typos, it also enables the researcher to identify variables that are associated, which is preparing the researcher/data collector for conducting further statistical analyses.

Descriptive Statistics in researches are of four main types. These include:

- ❖ The measure of the Frequency: count, percent, frequency.
- ❖ The central tendency measurement such as the mean, the median, and the mode.

- ❖ Dispersion measurement or the measurement of variance.
- ❖ The Percentile measurement.

The quantitative analysis of the data thus, quantitative interviews is done with the help of the questionnaires counting and placing of the data in a particular group and subgroups. It can be done through simple and cross-tabulation.

Descriptive statistical tools help in analyzing quantitative data using a descriptive statistical tools like numbers, words, tables, frequencies, percentages, pie charts, bar charts, and histograms to classify and analyzed the field responses from the respondents.

The primary purpose of doing research is to provide an informed decision, action, to show evidence or prove a model and theory, and it contributes to developing new knowledge in one's field of study (Bryman, 2007).

## The Significance of Research Include:

- ❖ It serve as a tool for building knowledge and also helps in facilitating learning
- ❖ Research is the means to understand several issues, and problems and
- ❖ Through research, there is an increase in Public Awareness of a particular phenomenon
- ❖ Researches aid towards business growth and Successes
- ❖ Research is a way to ascertain the truth and support it and do away with lies
- ❖ It helps in finding opportunities
- ❖ Doing research helps to improve your reading, listening, writing, observing, analyzing, note-taking, and sharing valuable information on a particular subject.
- ❖ Researching nourishes your mind and increase your thinking ability.
- ❖ It also helps research lecturers in classes when teaching their students.
- ❖ It serves as a source of references for further research
- ❖ It helps provides a guideline for addressing or solving problems.
- ❖ Researches help to provide a basis for several governmental policies.
- ❖ It is very important in businesses for higher profit gains and productivity
- ❖ Researches help to improve the quality of products and services

## 8. SUMMARY CONCLUSION & RECOMMENDATION

### 8.1 Summary

This article describes the various research methodologies in social sciences research taking into consideration the research paradigm, research design, data type & sources, the target population, sample size, sampling

technique, surveys/questionnaire (Questionnaire development, a test of validity, a test of reliability, pre-testing/piloting). Again, Ethical issues and considerations, data analysis, significant of research were discussed. The kinds of methodological approaches in researches were also outlined. Finally conclusion and recommendations.

### 8.2 Conclusion

The article has given a more understanding of quantitative research, qualitative research, and mixed research methods approach when researching. Again, the paper explains that it appears that the mixed methods research plays a much greater role in current and future researches than the other only quantitative or qualitative research because, it mostly, contains the potentials of overcoming the criticisms which are pointed out at each methodology individually.

However, it should be pinpointed that, a researcher can never be based on one of the methodologies as it varies from one researcher to another and it also depends upon the problem/phenomenon being studied by the researcher. In overall settings, it was indicated that the questions used in research determine the research methodology to be used.

The purpose of the research was to understand the various ground root of the methodological framework and which one best fit the kind of research and at what time. If the necessary budget is available, the researcher can go for both quantitative and qualitative research methods as it provides numerous perspectives.

To be aware of research methodologies with a very good idea can help you in focusing the target users with in-depth information/ data gathering. Overall, the primary aims and objectives of these research types are to provide a completed detailed description as determining which of the methods best fit or is suitable on a continuing debatable research topic.

### 8.3 Recommendations

- ❖ The study is useful to policymakers and research professionals
- ❖ It is recommended that teachers should help students' choose the best research methodology for their research.
- ❖ The researchers should read the different types of research methodology to know which one best fits their study.
- ❖ Universities or Institutions should not be static on one type of methodology but should try to explore other methodologies since both have merits and demerits.
- ❖ This article on research methodologies gives students an insight into how to conduct different types of research in social sciences.

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