

Qualitative and
quantitative research
is to analyze and
interpret data



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Qualitative and quantitative research designs are used to collect, analyze and interpret data so that more meaningful information is obtained.

Qualitative research attempts to establish a largely narrative, and holistic description to enable the researcher understand about a given cultural or social phenomenon. A qualitative research is conducted within natural settings with the use of interviews, documents reviews, and observations which can be used at the same time. Qualitative research has got many characteristics including being inductive, subjective and being naturalistic among other characteristics. Qualitative research uses purposeful type of sampling to collect data. Quantitative research is the orderly experimental investigation of phenomena and quantitative properties and their relationships. Quantitative research is broadly used in social sciences for instance, sociology, political science, psychology and anthropology. The quantitative research designs are either experimental or descriptive. Quantitative research is characterized by being deductive, objective, and use of numbers. It uses random sampling to obtain data from a given population.

Qualitative research design

Qualitative research can be defined as the system of enquiry that attempts to establish a largely narrative, and holistic description to enable the researcher understand about a given cultural or social phenomenon. A qualitative research is conducted within natural settings with the use of interviews, documents reviews, and observations which can be used at the same time. Therefore a qualitative research design is a plan for gathering and utilizing the qualitative data for the desired information to be obtained with adequate precision or in order for the null hypothesis to be tested in the

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right way. Qualitative research covers many forms of inquiry that are important in understanding and explaining the significance of social phenomena with very little disturbance to the natural settings if any. The forms of inquiry include naturalistic inquiry, field study, interpretative research, case study, ethnography, participant observation, and inductive research (Maxwell, 2005).

Qualitative study has got several characteristics and they include naturalistic inquiry, holistic perspective, inductive analysis, qualitative data, personal contact and insight, unique case orientation, dynamic systems, empathetic neutrality, context sensitivity, subjectivity and design flexibility. Naturalistic inquiry is concerned with studying situations in the real-world without manipulating or disturbing the participants, and having an observation on what takes place such that the facts are accepted as they unfold. Naturalistic inquiry goes beyond measurable or tangible variables to center on the research participants' social constructions. Social constructions are the products of sense making, meaning making mental activities in which human beings participate as a result of interaction with others. Social constructions are vital since they can determine the response of individuals or groups to situations, interactions, and events that they encounter. It is not the event, interaction, or situation which influences the response of an individual, but rather the standpoint, social location, age, gender, social class, values, beliefs, and attitudes determines their response (Ritchie & Lewis, 2003).

The holistic perspective is another characteristic of qualitative study. It is concerned with examination of the whole phenomenon as a multifaceted system. Inductive analysis is a characteristic of qualitative research in which <https://assignbuster.com/qualitative-and-quantative-research-is-to-analyze-and-interpret-data/>

an individual is involved in unfolding data, in order to discover the hidden interrelationships and dimensions as well as examining the open questions. Unique case orientation is a characteristic in which each and every individual case is given value and examined closely, with the idea of collecting the details of the cases which predominate. Qualitative research design is subjective such that the researcher is actively involved in the situation of research (Ritchie & Lewis, 2003).

With qualitative research, a type of sampling called purposeful sampling is used to collect data for analysis. Purposeful is a type of sampling that picks out information that is rich in cases for the purpose of in-depth study. This information that is rich in cases is one that provides a researcher with a great deal of issues concerning central importance to the aim of research. There are many types of purposeful sampling namely, intensity sampling, extreme and deviant case sampling, maximum variation sampling, typical case sampling, homogeneous sampling, stratified purposeful sampling, chain or snowball sampling, critical case sampling, criterion sampling, opportunistic sampling, confirming and disconfirming case sampling, operational sampling, mixed purposeful sampling, and convenience sampling (Maxwell, 2005).

The purposeful sampling is a very important technique in qualitative research since it increases the effectiveness of a program as the researcher reaches the lower socioeconomic groups. The researcher can now learn much more by considering in depth on understanding the interests, incentives, and needs of a small number of carefully chosen unfortunate families such that it is economical and very informative. The researcher will <https://assignbuster.com/qualitative-and-quantative-research-is-to-analyze-and-interpret-data/>

be able to focus on the typical instances which can display a wide variety (Ritchie & Lewis, 2003).

Quantitative research design

Quantitative research can be defined as the orderly experimental investigation of phenomena and quantitative properties and how they are related. The aim of quantitative research is to build up and utilize the theories, hypotheses, and mathematical models having to do with phenomena. The measurement process is central to quantitative research since it offers the key connection between the mathematical expressions of quantitative relations and the empirical observations. Quantitative research is broadly used in social sciences for instance, sociology, political science, psychology and anthropology. In quantitative research, the researcher's aim is to find out the relationship between an independent variable and the outcome or dependent variable within a population. The quantitative research designs are either experimental or descriptive. In a descriptive study, subjects are normally measured once and the study establishes merely the relationships between different variables while in an experimental study the subjects are evaluated before and after an intervention and the study establishes causality (Creswell, 2003).

There are three major types of quantitative research designs namely, descriptive, quasi-experimental, and experimental research design. A descriptive research design is designed to obtain enough information regarding a certain characteristic in a given field of study. It is possible for a descriptive study to help in developing theory, identifying problems using

current practice, justifying the current practice and in making judgments regarding what other may be doing while in similar situations. The quasi-experimental designs are meant to give alternative means to examine causality in those situations which are not favorable to experimental control. The experimental research design is designed to encourage the highest amount of control in order for the causality to be examined closely (Punch, 2005).

Quantitative research is usually characterized by being deductive, objective, and can use numbers. Being deductive means that quantitative research tests theory. Quantitative research is objective because the researcher is believed to obtain, analyze and interpret a quantitative data or information, while being isolated. Quantitative research uses the data that can be structured in form of numerical values or that can be converted into numbers immediately (Creswell, 2003).

Random sampling is a technique that is used during the quantitative research, and it deals with taking a number of observations which are independent, from a given probability distribution without engaging any actual population. A sample is an item selected from a given population under study, for investigational purposes. A random sample is the item that is selected by a technique involving an irregular component. Some times random variations occur, which means that the sample does not represent the population from which is obtained, and this is referred to as sampling error. The different types of sampling include simple random sampling, stratified sampling, and cluster sampling (Punch, 2005).

In simple random sampling, a sample is chosen such that all samples with similar size are given an equal chance of being chosen from the population under investigation. Stratified sampling is concerned with choosing independent samples from different groups, strata, or subpopulations in a given population under investigation. In stratified sampling, judicious stratification brings about efficiency. Cluster sampling is concerned with choosing the sample units within a group under investigation (Creswell, 2003).

Differences between quantitative and qualitative research designs

Both qualitative and quantitative designs are systematic since to qualify for a defining principle of research the designs must have a system. The quantitative research is believed to be objective while qualitative research is thought to be subjective. It is believed that, in obtaining, analyzing and interpreting a quantitative data or information, the researcher can stay on isolated and objective. This is not the case with qualitative research since with this type of research the researcher actively involved within the situation of research. Quantitative research is deductive while most qualitative research is inductive. Being deductive, quantitative research tests theory while the qualitative research generates theory and therefore inductive. By the use of quantitative designs of research, researchers usually obtain results that can be easily generalized while the qualitative designs of research usually produce the results that are not easy to generalize.

Quantitative research uses the data that can be structured in form of numerical values or that can be converted into numbers immediately while

qualitative research uses data that cannot be transported immediately into numerical values.