

# Free research paper on research designs

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## **Research Designs**

A research question is a set of words that describe a phenomenon that a researcher wants to study. It is also the questions that a researcher aims to answer through the findings of the research. For one to develop a good research question in any given field or subject, they need to consider some important aspects. First, the researcher must have adequate knowledge in the field he intends to research. The researcher must also have access to past literature in that field. The researcher has to know the past researches done in that field, identify the information gaps which his research aims to fill. Research questions should be simple and straight forward. An example is what are the effects of climate change on wild life population?

A hypothesis is a measurable and testable proposal that gives an insight into the research question. In other words, this is a statement that the research seeks to prove or dismiss. An example is, wildlife population has reduced due to climatic changes and global warming. Not all researches have hypotheses, and one research can have several hypotheses with each hypothesis representing an aim of the research.

The hypothesis can be formed from past experiences, potential problems or even personal interest in a certain subject. The researcher formulates each hypothetical statement in line with each study question or problem so that at the end of the research, the hypothesis is either confirmed to be true or wrong.

There are two types of hypotheses, the null hypothesis and the alternative hypothesis. The null hypothesis is represented by  $H_0$  or  $H_N$ . The null hypothesis is a theoretical statement that is unproven but is used by the researcher as a basis of carrying out the research. An example of a null hypothesis is; the wild life population is not affected by climate change and global warming. The findings of the research are given in terms of the null hypothesis too. If the research findings show a relationship between wild life and climate change, the conclusion will be; there is a relationship between wild life population and climate change and global warming. The wild life population is negatively affected by climatic changes and global warming. The null hypothesis emphasizes on the matter being investigated. However, if the conclusion is positive, it does not really mean the hypothesis is true, it shows there was not adequate evidence to dismiss the hypothesis. The null hypothesis is therefore not reliable to give accurate results; however, it guides the researcher well during the research.

The alternative hypothesis is represented by the initials  $H_A$  or  $H_1$ . It is a statement that describes what results are expected from that particular research. Historical information is used to formulate alternative hypotheses. It is usually the opposite of the null hypothesis hence; it is only reached if the null hypothesis is not approved. It takes the following format; the wild life population is adversely affected by the climatic changes and global warming. The null and alternative hypotheses are formulated together in a research to ensure that all possible conclusions are represented in the hypotheses. When the research is completed, one of the hypotheses is rejected and the other accepted. These two hypotheses enhance the research effort in that

they provide the researcher the possible end results of the research and, they also guide the researcher's through the whole research process.

The scope of the hypothesis and the research question can be narrowed down and refined to form a specific, simple and comprehensive research guide. There is a process the researcher will have to undertake to narrow down and refine the scope of the study. To narrow the scope, the researcher would consider a specific topic, for example, if it is about wild life population, the topic is made narrower by focusing solely on the elephant population.

The theoretical approach can also be used to refine the research question and hypotheses. For example, if the research is about wild life, the researcher focuses only on population and not other aspects of the wild life.

The researcher will also consider focusing on a short time span to carry out the research. Short time spans allow a comprehensive research and the results can be more accurate, for example, the research could be about elephant population trends in the last half a decade. It is easier to analyze the trends for the five years than a time span of 50 years. The research questions can also be refined by focusing on a particular population group.

This could include gender, age, tribe, species, size and color/race. An example is a research about the white rhinos in South Africa.

Lastly, the research hypothesis and questions can be narrowed down scope-wise by doing a research basing on the geographical location of the study. A large geographical area to carry out a research will make the research questions ineffective. Carrying out a research about elephant population in Africa, the researcher will find it hard to formulate fine research questions. A research focusing on a smaller geographical area like elephant population in

a national park in East Africa is easier to carry out compared to large geographical areas.

## **References**

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