What is Inductive Research?

The inductive research **aims at creating new knowledge**. This usually begins with an area of interest for the researcher. The researcher creates a research problem from this selected field and develops research questions. He then attempts to find data through his **observations**. A researcher can rely on various research methods in order to gather data for his research questions. This can be **interview method or observation method**, or any other. In the analytical stage, the researcher attempts to search for patterns from the data. In the final stage of the inductive research, the researcher builds the theory using his data and the identified patterns. This highlights that in inductive research a **bottom-up approach** is being used.

Grounded theory by Glaser and Strauss can be considered as a fine example of the inductive approach in research. This is mainly because, in Grounded theory, the focus is on creating new knowledge through a cyclic process. A researcher who steps into the field has an open mind, unbiased, and without preconceived ideas. He derives the research problem mostly from the setting itself, and the data guides him towards the creation of a new theory.

What is Deductive Research?

Deductive research is quite different from inductive research as it uses a **top-down approach** in opposition to the inductive research. Deductive research can be understood as a research category that includes a **process of testing hypothesis in order to verify a theory**. Unlike inductive research that generates new knowledge through the creation of theories, the deductive research aims at testing a theory.

It does not attempt to find patterns in data but uses observation with the intention of validating the pattern. This is used by researchers mainly to falsify theories. Deductive approach mostly comes in **quantitative research** where the researcher attempts to bring out causality and present a statistical analysis. This highlights that inductive and deductive research are vastly different and can be used depending on the objectives of the researcher.

What is the difference between Inductive and Deductive Research?

• **Approach:**
  
  • Inductive and deductive research processes have to be viewed as reversals.
• Inductive research uses a bottom-up approach.

• Deductive research uses a top-down approach.

• **Aim:**
  
  • The inductive research aims at producing new knowledge or creating new theories.
  
  • The deductive research aims at verifying theories.

• **Research Questions vs Hypothesis:**
  
  • In inductive research, researcher mainly focuses on finding answers to the research questions.
  
  • In deductive research, hypothesis are tested.

• **Usage:**
  
  • The inductive approach is mostly used in qualitative research that aims at finding rich descriptive data.
  
  • The deductive approach is mostly used in quantitative research that mostly deals with numbers.

• **Use of Observation:**
  
  • In inductive research, the researcher attempts to find patterns through observation.
  
  • In deductive research, the researcher uses observation with the intention of validating the pattern.

**Inductive and deductive approaches to research**

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The main difference between inductive and deductive approaches to research is that whilst a deductive approach is aimed at testing theory, an inductive approach is concerned with the generation of theory emerging from the data.
A deductive approach usually begins with a hypothesis, whilst an inductive approach will usually research questions to narrow the scope of the study.

For deductive approaches the emphasis is generally on causality, whilst for inductive approaches the aim is usually focused on exploring new phenomena or looking at previously researched phenomena from a different perspective.

Inductive approaches are generally associated with qualitative research, whilst deductive approaches are more commonly associated with quantitative research. However, there are no set rules and some qualitative studies may have a deductive orientation.

One specific inductive approach that is frequently referred to in research literature is grounded theory pioneered by Glaser and Strauss.

This approach necessitates the researcher beginning with a completely open mind without preconceived ideas of what will be found. The aim is to generate a new theory based on the data.

Once the data analysis has been completed the researcher must examine existing theories in order to position their new theory within the discipline.

Grounded theory is not an approach to be used lightly. It requires extensive and repeated sifting through the data and analysing and re-analysing multiple times in order to identify new theory. It is an approach best suited to research projects where the phenomena to be investigated has not been previously explored.

The most important point to bear in mind when considering whether to use an inductive or deductive approach is firstly the purpose of your research; and secondly the methods that are best suited to test a hypothesis, explore a new or emerging area within the discipline, or to answer specific research questions.