

Uma sekaran's chapter 2 review

Science



The chapter 2 of Research Methods of Business by Uma Sekaran speaks of scientific investigation detailing on the eight hallmarks of science and the limitations of scientific research in management along with the hypothetico-deductive method of research. The hallmarks or main distinguishing characteristics of scientific research can be the following

1. Purposiveness: The research should have a purposive focus i. e. some definite purpose will be served after the research

2. Rigor: Rigor means carefulness, scrupulousness and the degree of exactitude in research investigations good theoretical base and a sound methodological design will add rigor to a purposive study.
3. Testability: if a certain hypothesis gets developed through unstructured interview or library search, then the hypothesis can be tested by applying certain statistical tests to the data collected for the purpose.
4. Replicability: The results of the test of hypotheses should be supported again and again when same type of research is repeated in other similar circumstances.

The researchers will gain confidence in the scientific nature of the research.

5. Precision and confidence: Precision refers to closeness of the findings to “reality” based on a sample. It reflects the degree of accuracy or exactitude of the results on the basis of the sample to what it really exists in the universe. Confidence refers to the probability that the estimations are correct.
6. Objectivity: The conclusions drawn through the interpretation of the results of data analysis should be objective i. e. they should be based on facts of the findings of the actual data.

The more objective the interpretation of data, the more scientific the research investigation becomes. 7. Generalizability: This refers to the scope of applicability of the research findings in one organizational setting to other settings. The wider the range of applicability of the solutions generated by research, the more useful the research is to the users. 8. Parsimony: Simplicity in explaining the phenomenon or the problem that occur and in generating solutions for the problems is always preferred to complex research frameworks.

In the management and behavioral areas, it is not possible to conduct investigations that are 100% scientific because of measurement and collection of data in the subjective areas like feelings, emotions, attitudes and perceptions. These problems occur whenever one tries to quantify human behavior. Thus, the eight hallmarks of science cannot be achieved in full. The deduction and induction processes are explained as follows
Deduction: it is the process of arriving at a reasoned conclusion by logical generalization of a known fact. Induction is the process where a certain phenomenon is observed and then a conclusion is arrived at.

The seven step processes in hypothetico-deductive method are 1.

Observation: It is the very first stage in which one senses that certain changes are occurring or some new behaviors, attitudes and feelings are surfacing. When the observed phenomenon are seen to have potentially important consequences, then one will proceed to preliminary information gathering. 2. Preliminary information gathering: Preliminary information gathering involves seeking of information in depth of what is observed. Through interviews and library search, the mass of information can be
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gathered. . Theory formulation: It is a step which attempts to integrate all information in a logical manner so that the factors responsible for the problem can be conceptualized and tested. The theoretical framework formulated is often guided by experience and intuition. Here the critical variables are examined as to their contribution or influence in explaining why the problem occurs and how it can be solved. 4. Hypothesizing: From the theorized network of associations among the variables, certain testable hypotheses or educated conjectures can be generated.

The hypothesis thus generated is tested to determine if the statement is supported. 5. Further scientific data collection- After the development of the hypothesis, data with respect to each variable in the hypothesis need to be obtained. 6. Data analysis- The data gathered are statistically analyzed to see if the hypotheses that were generated have been supported. 7.

Deduction - It is a process of arriving at conclusions by interpreting the meaning of the results of the data analysis.