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Level : Master One

Option : Civilization and Literature

Research Methodology Course : Research Design in Social Sciences

Research design is a comprehensive plan for data collection in an empirical research project. It is a “blueprint” for empirical research aimed at answering specific research questions or testing specific hypotheses, and must specify at least three processes: (1) the data collection process, (2) the instrument development process, and (3) the sampling process. Bhattacharjee (2012 , 35)

Types of Research Designs

Data collection methods can be broadly grouped into two types:

1- Positivist Method : as laboratory experiments and survey research, are aimed at theory (or hypotheses) testing, Positivist methods employ a deductive approach to research, starting with a theory and testing theoretical postulates using empirical data.

2- Interpretive Method : interpretive methods, such as action research and ethnography, are aimed at theory building , The interpretive methods employ an inductive approach that starts with data and tries to derive a theory about the phenomenon of interest from the observed data

Unlike positivist or experimental research that utilizes a linear and one-directional sequence of design steps, there is considerable variation in how a qualitative research study is organized. In general, qualitative researchers attempt to describe and interpret human behavior based primarily on the words of selected individuals (“informants” or “respondents”) and/or through the interpretation of their material culture or occupied space. There is a reflexive process underpinning every stage of a qualitative study to ensure that researcher biases, presuppositions, and interpretations are clearly evident thus ensuring that the reader is better able to interpret the overall validity of the research.

The advantage of using qualitative methods is that they generate rich, detailed data that leave the participants' perspectives intact and provide multiple contexts for understanding the phenomenon under study.

Among the specific strengths of using qualitative methods to study social science research problems is the ability to:

- Obtain a more realistic view of the lived world that cannot be understood or experienced in numerical data and statistical analysis;
- Provide the researcher with the perspective of the participants of the study through immersion in a culture or situation and as a result of direct interaction with them;
- Allow the researcher to describe existing phenomena and current situations;
- Develop flexible ways to perform data collection, subsequent analysis, and interpretation of collected information;
- Yield results that can be helpful in pioneering new ways of understanding;
- Provide a holistic view of the phenomena under investigation;
- Interact with the research subjects in their own language and on their own terms; and,
- Create a descriptive capability based on primary and unstructured data.

Sometimes, joint use of qualitative and quantitative data may help generate unique insight into a complex social phenomenon that are not available from either types of data alone, and hence, mixed-mode designs that combine qualitative and quantitative data are often highly desirable

Quality of Research Designs : There are three criteria that give value and quality to the research design :

- 1- **Internal validity**, also called causality, examines whether the observed change in a dependent variable is indeed caused by a corresponding change in hypothesized independent variable, and not by variables extraneous to the research context.
- 2- **External validity** : or generalizability refers to whether the observed associations can be generalized from the sample to the population (population validity), or to other people, organizations, contexts, or time
- 3- **Construct validity** : examines how well a given measurement scale is measuring the theoretical construct that it is expected to measure. Many constructs used in social science research such as empathy, resistance to change, and organizational learning are difficult to define, much less measure.
- 4- **Statistical conclusion validity** examines the extent to which conclusions derived using a statistical procedure is valid.

Some specific limitations associated with using qualitative methods to study research problems in the social sciences include:

- Drifting away from the original objectives of the research in response to the changing nature of the context;
- Arriving at different conclusions based on the same information depending on the personal characteristics of the researcher;
- An inability to investigate causality between different research phenomena;
- Difficulty in explaining the difference in the quality and quantity of information obtained from different respondents and arriving at different, non-consistent conclusions;
- Requires a high level of experience from the researcher to obtain the targeted information from the respondent;
- May lack consistency and reliability because the researcher can employ different probing techniques and the respondent can choose to tell some particular stories and ignore others; and,
- Generation of a significant amount of data that cannot be randomized into managable parts for analysis.

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Selecting a Research Design

Regardless of the specific research design chosen, the researcher should collect quantitative and qualitative data using a combination of techniques such as questionnaires, interviews, Observations, documents, or secondary data. For instance, even in a highly structured survey questionnaire, intended to collect quantitative data, the researcher may leave some room for a few open-ended questions to collect qualitative data that may generate unexpected insights not otherwise available from structured quantitative data alone. Likewise, while case research employ mostly face-to-face interviews to collect most qualitative data, the potential and value of collecting quantitative data should not be ignored.

1- The Case Research

Definition

A case study is an in-depth study of a particular research problem rather than a sweeping statistical survey. It is often used to narrow down a very broad field of research into one or a few easily researchable examples. The case study research design is also useful for testing whether a specific theory and model actually applies to phenomena in the real world. It is a useful design when not much is known about a phenomenon. It has many Characteristics :

- A case study is a research methodology that has commonly used in social sciences.
- A case study is a research strategy and an empirical inquiry that investigates a phenomenon within its real-life context.
- Case studies are based on an in-depth investigation of a single individual, group or event to explore the causes of underlying principles.
- A case study is a descriptive and exploratory analysis of a person, group or event.
- A case study reserach can be single or multiple case studies, includes quantitative evidence, relies on multiple sources of evidence and benefits from the prior development of theoritical propositions.
- Case studies are analysis of persons, groups, events, decisions, periods, policies, institutions or other systems that are studied holistically by one or more methods.

2-Causality studies

Causality studies may be thought of as understanding a phenomenon in terms of conditional statements in the form, "If X, then Y." This type of research is used to measure what impact a specific change will have on existing norms and assumptions. Most social scientists seek causal explanations that reflect tests of hypotheses. Causal effect (nomothetic perspective) occurs when variation in one phenomenon, an independent variable, leads to or results, on average, in variation in another phenomenon, the dependent variable..

Conditions necessary for determining causality:

-Empirical association : a valid May be thought of as understanding a phenomenon in terms of conditional statements in the form, "If X, then Y." This type of research is used to conclusion is based on finding an association between the independent variable and the dependent variable.

-Appropriate time : to conclude that causation was involved, one must see that cases were exposed to variation in the independent variable before variation in the dependent variable.

-Nonspuriousness--a relationship between two variables that is not due to variation in a third variable.

Characteristics :

1. Causality research designs help researchers understand why the world works the way it does through the process of proving a causal link between variables and eliminating other possibilities.
2. Replication is possible.
3. There is greater confidence the study has internal validity due to the systematic subject selection and equity of groups being compared.

Descriptive Studies :

Descriptive research designs help provide answers to the questions of who, what, when, where, and how associated with a particular research problem; a descriptive study cannot conclusively ascertain answers to why. Descriptive research is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation.

Main Characteristics

1. The subject is being observed in a completely natural and unchanged natural environment. True experiments, whilst giving analyzable data, often adversely influence the normal behavior of the subject.
2. Descriptive research is often used as a pre-cursor to more quantitatively research designs, the general overview giving some valuable pointers as to what variables are worth testing quantitatively.
3. If the limitations are understood, they can be a useful tool in developing a more focused study.
4. Descriptive studies can yield rich data that lead to important recommendations.

5- Exploratory Research :

An exploratory design is conducted about a research problem when there are few or no earlier studies to refer to. The focus is on gaining insights and familiarity for later investigation or undertaken when problems are in a preliminary stage of investigation.

Main Characteristics :

1. Design is a useful approach for gaining background information on a particular topic.
2. Exploratory research is flexible and can address research questions of all types (what, why, how).
3. Provides an opportunity to define new terms and clarify existing concepts.
4. Exploratory research is often used to generate formal hypotheses and develop more precise research problems.
5. Exploratory studies help establish research priorities.

References :

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