Lecturer's Notes

Quantitative Research Approach and Its Designs

As already stated, Quantitative research is an approach for testing objective theories by examining the relationship (if there is any) among variables. These variables in turn, can be measured or quantified based on different quantitative research tools (e.g questionnaire), so that numbered data can be analyzed using statistical procedures (e.g regression analysis). **Quantitative research designs** are very often descriptive [subjects usually measured once] or experimental [subjects measured before and after a treatment].

A quantitative research approach requires the researcher's decision of a **research design** among different choices such as **case study, correlational, and experimental**.

Case Study

Case study research is a methodology used by both qualitative and quantitative approach. However, case study in a quantitative approach refers to an in depth analysis of a single group of individuals or organizations or specific industries. The aim of a case study research is to provide information by capturing a variety of variables in order to classify the complexity of a set of conditions that come together to produce a particular phenomenon, situation or event. In a quantitative research, once the researcher decides that the design is case study may contact a questionnaire survey as a data collection tool in order to gather data that characterize the specific case of the investigation.

Correlational Design

Since this research approach aims to examine any relationship that exists among two or more variables has also a correlational design of research. A **correlational study** is a quantitative method of **research** in which you have 2 or more quantitative variables from the same group of subjects, & you are trying to determine if there is a relationship between the 2 variables (a similarity between them, not a difference between their means) etc. A *correlational study* determines whether or not two variables are correlated. This means to *study* whether an increase or decrease in one variable corresponds to an increase or decrease in the other variable. A *correlational research design* is a specific type of non-experimental *design* used to describe the relationship between or among variables. It provides empirical evidence suggesting two or more variables are – or are not – related.

Experimental Design

Is a plan of procedures that enable the researcher to test hypothesis by reaching valid conclusions about relationships between independent and dependent variables. It refers to the conceptual framework within which the **experiment** is conducted (indicating nature before and after treatment). Usually, under great usage in medicine.

Quantitative Research Approach
Design: Case Study
Design: Experimental
Design: Correlational