

Research and design methodology: strengths and weakness

[Design](#)



The strength of this design is that It allows for conditions to be studied as they occur, as these conditions and situations cannot be controlled. The one major weakness of correlation design is that it does not allow us to determine cause and effect (Beer, 2010). Many variables to the situation that can potentially alter an outcome that has nothing to do with the behavior that is being studied (Beer, 2010) Under experimental design it allows researchers to introduce variables and examine the effects of these variables in either a laboratory setting or In the subjects natural environment (Beer, 2010).

This method has a major strength In which It allows for the Interpretation of cause and effect to the situation. The weakness of this method is that the different settings may reduce the accuracy of any findings. If conducted in a laboratory, findings may be different than if conducted in a real world setting (Beer, 2010). In the developmental research designs which include longitudinal, cross-sectional, and sequential methods it involves the study of groups using varying time methods.

In longitudinal research he same group of subjects Is studied repeatedly and changes are recorded as the participant of the group age. These studies may occur over a few months or last several years (Beer, 2010). The strengths of this design are that it allows researchers to identify common patterns, as well as individual differences that occur during development (Beer, 2010). It also allows researchers to look at relationships between events and behaviors that occur early and later in the study (Beer, 2010).

There are several downfalls to this method of research. The participants may suddenly move away or drop out of the research, repeated exposure to studies may cause participants to become more aware of their thoughts and actions, and revise them in ways that have nothing to do with normal age related developmental changes, performance may improve due to practice or cohort effects (Beer, 2010).

Practice effects occur when performance of the participants improves due to familiarity of the test, not because of developmental factors, cohort effects occur when participants are affected by historical and cultural conditions that may not have an influence on groups of participants of different ages who are studied at the same point in time, this allows for the research of age related trends (Beer, 2010). Using this method participants are studied only once so the concern for drop out or practice effects is eliminated.

This is the major strength of this research design. There are a few weaknesses involved in the design. It does not allow for the study of individual development trends and cohort effects still exist. The sequential design method consists of several similar cross-sectional or longitudinal studies (sequences) that occur at varying times (Beer, 2010). The strengths of this method allow both longitudinal and cross-sectional comparisons to be made, while revealing cohort effects.

This method allows the tracking of age related changes more efficiently than the longitudinal design (Beer, 2010). This method shares the weaknesses of the longitudinal and cross-sectional designs, but allows for easier identification of these problems. The research methods include systemic

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observation; naturalistic and structured observation, self-reports; clinical interviews, structured interviews, questionnaires, and test; clinical or case studies and ethnography.

Naturalistic and structured observations observe behavior, however in naturalistic observation behavior is observed in the subject's natural environment, and in structured development the subjects are observed in a lab setting, where conditions are the same for all participants (Beer, 2010). The self-report methods include clinical interviews, structured interviews, questionnaires, and test. These methods share the fact that interviews are used to gather information, they differ in the way the interviews are conducted.

During clinical interviews researchers use a flexible conversation style to gain the participants point of view (Beer, 2010). These interview questions can be phrased differently from person to person which may lead to a lot of flexibility when interpreting the results (Beer, 2010). Structured interviews, including test and questionnaires, consist of each individual participant being asked the same question set in the same manner, which may not give the researcher the same depth of information as a clinical interview, it does take away eliminate the legibility commonly associated with clinical interviews (Beer, 2010).

In clinical or case study methods a complete picture of an individual's psychological function are gathered from many of the above listed methods to include test scores (Beer, 2010). The goal of this method is to build a complete picture of an individual's function and the experiences that led to it

(Beer, 2010). Ethnography is essentially a case study of a particular culture or social group. This method relies on extensive research that is derived from observation, visits, interviews, and questionnaires (Beer, 2010).