# Experimental design and quasi-experimental design

Design

An experimental study is defined by the way a researcher manipulates independent variables to prove or disprove a hypothesis. Outcomes are then measured and recorded. Experimental studies are considered one of the most valid ways of determining causal relationships (Balers, Reich, & Symons, 2012). When the independent variable cannot be controlled or other factors important to the study are out of the researchers control, the study is then called a Quasi-

Experimental design study( Pont, & Shabbier, 2012).. The purpose of this paper is to identify the differences between the two types of studies, list several strengths and weaknesses of each study and to determine whether the sample research study from class readings Is an Experimental design study or a Quasi- Experimental design study. Saltcellars between the two designs are the use of participants or subjects who agree to submit to some form of treatment or review, data Is gathered from the participants and measured to see if the treatment or testing was the cause of any hangers in results.

Differences between the two forms of research is that in a Quasi-Experimental study participant are not necessarily chosen at random as would be in an Experimental study. The control group and the treatment group in a Quasi - Experimental study may not undergo the exact same parameters of treatment. When this occurs, different types of hypotheses may develop, questioning the validity of the findings. For instance, if a researcher wanted to study the effects of a certain cancer drug and was able to randomly select a control group, a treatment group and Isolate ND control the Independent variable, an Experimental study would be Ideal.

On the other hand If a research wanted to conduct a study on the effects of proper nutrition and cancer, a equals-ExperImental study might be the better route to follow due to the lack of control of the Independent variable. The strengths of an Experimental design are that the results are documented and repeatable, the variables can be isolated and identified and the study is capable of showing cause and effect. The strengths of a Quasi- Experimental study is the research is more feasible, the external validity is increased and that research can continue even if experimentation is not possible.

The weaknesses of an Experimental study is all variables must be controlled, true experiments may not be ethical and therefore cannot be used and there is always the possibility of selection bias. The weaknesses of a Quasi-Experimental study Is there is a lack of random assignment, internal validity is reduced and there Is a limited ability to make causal claims. The sample text that was provided In the readings for this assignment seems to me to be a Quasi- Experimental study. Although participants were randomly assigned, they were not indicative of the population.

While the research conducted was feasible, true measured or repeatable. Finally, I do not feel as though the independent variables can be isolated.