

# Experimental and non experimental research designs

Design



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Evaluating a Survey Student's Name Institution Research can either be experimental or no-experimental. Between the two research methods, experimental research is the most scientifically and also the most sophisticated research method. This makes the experimental be defined as observation that is under controlled conditions. Experimental research design method is concerned with examination of the effect of independent variable on the variable that is dependent.

In this, the independent variable is manipulated via intervention or the treatment. The dependent variable is used in the effect of those interventions (Donald A. , Lucy J. , Share R. And Christine S. 2014). Accurate research done through experimental research must consist of the following features: manipulation, control and randomization. Whereby, manipulation refers to consciousness of the independent variable by the researcher. This is via the interventions or treatment of the dependent variable by observing its effect.

Control on the other hand refers to the use of control group and controlling the effects of extraneous a variable on the dependent variable in which researcher is interested. Finally on the characteristics of experimental research method, randomization explains that, each subject has an equal chance of being assigned to experiment or to the study that is being carried out randomly. The following is an example of experimental research question carried out.

Assuming a certain researcher of a university wanted to know the effect of providing online feedback to students immediately after unit examinations.

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The researcher decides to make use of two groups of economics that were taught by the same lecturer, the researcher making SE of a random method selects one group to receive feedback immediately through online means about the way they performed in the test then the other group is scheduled to receive their feedback during the next time they will be having class.

The researcher will then make a comparison between the two groups' exam marks and their final grades in the unit. If it happens that the scores and the final grades were much higher than how they could how they are accounted for, then the lecturer can make a conclusion that the independent variable that is the online feedback lead o a greater effort in learning than those who attend class physically (independent variable). In any experiment, one should always seek to control all other variables that are likely to affect the dependent variable.

From the above example, the researcher will try his level best to ascertain that the two groups had the same lecturer; had their class the same time but different days; the lecture notes are similar among other factors. The researcher will also make sure that none of the groups was much more prepared than the other. In order to ensure a true experiment without bias, the searcher may decide to toss a coin so that during random assignment, each unit has equal and independent chance to the other of being assigned to any group at his disposal.

Non experimental research method is one of the research designs as mentioned above. In this design, the researcher observes the event as it occurs naturally and there is no external variables that are brought into

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consideration. In this design, the variables are not willingly manipulated neither is the setting controlled. Researchers who use nongovernmental method collect data without making changes or introducing treatments from outside.

This design can be used to conduct the studies that the independent variables cannot be maintained or the studies or research situations where it is practically impossible to carry out an experiment. In non-experimental research, the researcher identifies variables and looks for relationships among them but he cannot interfere with the variables. Major forms of this design are relationship studies which include ex post facto, survey research and correlation research.

In ex post facto, the researcher does not interfere or manipulate with the variables that are independent (Barker R. , You-Fang L. 2010). An example of question in non experimental research is, " What is the effect of part-time work on school achievement of high school students? " A researcher would make use of the ex post facto method as explained below. The researcher will not manipulate the students by making some of them take part-time Jobs while others do not. Instead, he will identify those who do not participate in part-time Jobs and compare their performance with those who do.

Therefore, the researcher must be extra careful while interpreting this kind of results. They should make sure that they do not establish their own casual allegations within the variables that are under study. Experimental and non-experimental research designs have the following differences; Experimental researchers are able to perform experiments on people and also manipulate

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the predictor variables while the non-experimental researchers are forced to do observation and interpretation of what they are looking at.

Researchers doing experimental design can come out and say, X causes Y, this has a lot of power. Non-experimental researcher can only come close to that because he or she cannot say certainly that X leads occurrence of Y.

Face validity to greater extent assesses how an instrument asks all the needed questions and whether the survey asks all the required questions at the right level for the target audience.

Face validity also looks to what extent does the survey instrument look valid to that individual who is untrained because people are not likely to cooperate if the survey instrument look ambiguous to the individuals (D. B, 2012). As a surveyor, I would make sure that the tools that am using are either easier to use by the people that am interacting with to carry out the survey. This will enable a surveyor come out with the required information because he will be having the right tools for survey and also, asking the relevant question that were intended for the survey.