

Observing Strong Evidence: EXPERIMENTAL STUDIES

Part of an infographic series on research study design for educators

What defines an experimental study?



Intervention Group

Intervention groups, sometimes referred to as treatment groups, receive some form of intervention, such as a new reading program, designed to result in some change in behavior.

Control Group

Control or comparison groups do not receive the intervention. They take the same assessments as the intervention group but do not receive the experimental intervention.



Random Assignment

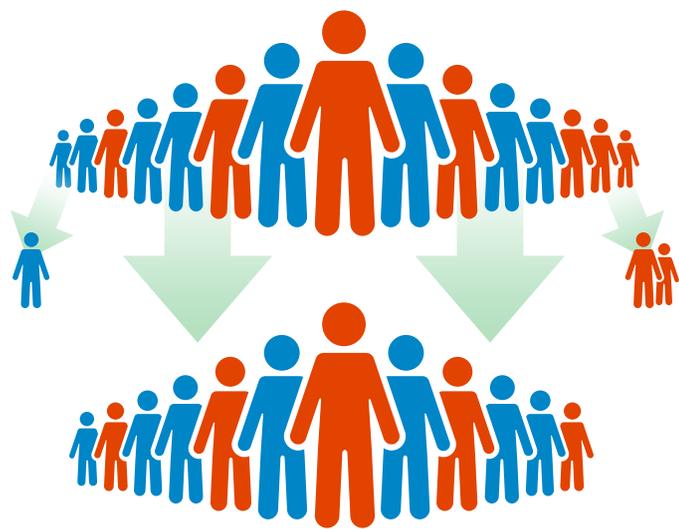
Random assignment helps ensure that the two groups are as similar as possible going into the experiment. It is the random assignment to a group that makes it possible for experiments to make strong claims about an intervention having an impact. Because the only difference between the intervention group and the control group is that the intervention group received the experimental intervention, any changes between the groups can be attributed to the intervention. Random assignment must take place before the groups are formed and helps ensure there is no bias in the selection process.

What else should be considered?

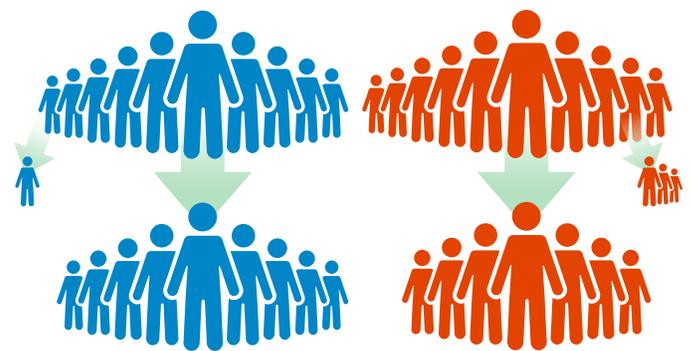
Attrition

Attrition occurs when participants leave the study. The subjects who leave the study may be different than those who stay in the study which can create a bias and reduce confidence in the results. There are two types of attrition.

Overall attrition is the total number of subjects that left the study. If a study had 200 total students in it and lost 40 students, that would leave 160 in the study and would result in 20% overall attrition.



Differential attrition is the difference in the attrition rate for each group. For example, if there are 100 students in both the intervention and the control group and 10 left the intervention and 30 left the control group it would mean the intervention group had 10% attrition and the control group 30% attrition. The differential rate then is 20%.



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