

## Quadrant II – Transcript and Related Materials

**Programme: Bachelor of Arts (Third Year)**

**Subject: Psychology**

**Paper Code: PSC109**

**Paper Title: Psychological Research**

**Unit: 03 (Experimental Research)**

**Module Name: Types of experiments**

**Name of the Presenter: Michelle Fernandes (Ph.D)**

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### Notes

#### Laboratory experiments

Laboratory experiments is the most common method of data collection in psychology. The term laboratory however, simply designates a room or similar situation that contains the equipment needed for the experiment and which allows for the control of key variables, such as the noise and lightening levels and interactions with and between the participants.

#### Field experiments

Filed research uses locations such as schools, hospitals, streets, where behaviour can be observed under more natural conditions than is possible in the laboratory. For this reason, this type of data gatherings is sometimes called naturalistic research.

In a typical field experiment, the researcher creates different situations in the filed that represent different levels of the IV and then observes the participants unconstrained responses in those situations. This carries the advantage of allowing the sampling of the range of possible responses in that situation, rather than, as in the laboratory situation, the measurement of a single specific piece of behaviour. It also reduces the likelihood of reactivity effects because participants need not be aware that the experiment is taking place.

## **True experiments**

A true experiment is one that, because of its design features, can allow a causal link between an IV and a DV to be inferred with a high degree of confidence, as long as a high degree of control of extraneous variables is also achieved.

The essential design features required of a true experiment are as follows:

- **Random assignment to conditions:** The research participants must be randomly assigned to the different levels of the IV (conditions) in the experiment. Random assignment is a necessary condition for making causal inferences about the relation between IV and DV because it ensures that any differences between individual participants are evenly spread across the conditions.
- **Equal treatment of participants:** The treatment of research participants must be equal in every way except in relation to the variable being investigated as the IV

## **Quasi experiments'**

A quasi experiment is one in which either random assignment to conditions is not carried out or in which participants are not treated equally or both. Therefore, a quasi-experiment does not allow a firm inference to be drawn that the IV caused observed changes to the DV. However, it may be possible to conclude that a causal relationship is suggested, with confirmation awaited from the results of a true experiment.

Quasi experiments are more suitable for real natural world setting.

## **Non-experimental correlational research**

A common form of research that resembles an experiment employs the correlational or natural groups design. This approach compares groups that differ in terms of a particular characteristic, such as sex, intelligence or handedness, with a view to trying to detect a measurable difference between the groups in terms of a variable of interest. Investigations of this type are not experiments because the allocation of participants to a group is not carried out in random by the researchers but is determined by the presence or absence of qualifying characteristics of the participants. These characteristics are imported into the investigation by the participants themselves. The variable acting as the IV cannot therefore be manipulated inside the investigation to see whether the DV changes.

**References:**

1. Dyer, C. (2013). *Research in Psychology: A practical guide to methods and statistics*, Delhi: Wiley India.