

Experiments

All experiments have an IV and a DV*. Researchers manipulate the IV, hold other variables constant, and measure change in the DV.

Experiments provide insight into cause and effect by demonstrating the outcome when a particular factor is manipulated.

*They may have more than one IV and more than one DV.



People in a shopping centre are asked if they can memorise a list of words (to see if people are better able to remember words in a random or organised order).

Is this study high or low in ecological validity? Is this study a field or a lab experiment?



Twins are a quasi-experiment. But is it a natural experiment or a study of difference (no true IV)?

Lab
A place in which research can be conducted under highly controlled conditions, e.g. a sleep observation lab.
Participants go to the researcher.

Field
A natural environment where research may be conducted.
Researcher goes to participants.

Quasi
Quasi means 'apparently but not really; almost'.
In a quasi-experiment, causal conclusions may not be justified because (a) the independent variable is not deliberately manipulated (b) participants are not randomly allocated to conditions.

Independent variable (IV)
Dependent variable (DV)
Environment
Are participants aware that their behaviour is being studied?
Task
Control of extraneous variables
Strengths

Lab experiment
Manipulated by experimenter
Measured in a lab, may be artificial
Contrived (i.e. arranged in a way that is not like everyday life)
Likely ... and therefore study may lack validity
Could be artificial or naturalistic
High
High levels of control mean cause and effect are more clearly demonstrated. May be high in ecological validity if an everyday task is used for the DV. Artificial environment means demand characteristics are more likely to be triggered.

Field experiment
Manipulated by experimenter
Measured in the field
'Natural'
Unlikely
Could be artificial or naturalistic
Low
More natural environment means participants may not know their behaviour is being studied and this may reduce demand characteristics.

Quasi experiment May be divided into:	
Natural experiment	Difference study
Manipulated by someone/something	An existing difference, e.g. gender.
May be measured in a natural environment or may be in a lab	
May be natural or may be contrived	
Likely ... and therefore study may lack validity	
Could be artificial or naturalistic	
Low No control over participant variables because participants not randomly allocated to conditions	
Allows research where the IV can't be manipulated for ethical or practical reasons. Enables psychologists to study 'real' problems such as the effects of a disaster on health.	

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