Pre-Experimental Designs

One Shot Case Study
To attempt to explain a consequence by an antecedent.

X → O
Pre-Experimental Designs

One Group Pretest-Posttest Design

To evaluate the influence of a variable.

O₁ → X → O₂
Pre-Experimental Designs

Static Group Comparison

To determine the influence of a variable on one group and not on another.

GROUP I \[ O_1 \rightarrow X \]
GROUP II \[ \rightarrow O_2 \]
True Experimental Designs

Pretest-Posttest Control Group Design

To study the effect of an influence on a carefully controlled sample.
True Experimental Designs

Solomon Four Group Design
To minimize the hawthorne effect.

R

\[ \begin{align*}
O_1 & \rightarrow & X & \rightarrow & O_2 \\
O_3 & \rightarrow & & \rightarrow & O_4 \\
\phantom{O_3} & \rightarrow & X & \rightarrow & O_5 \\
\phantom{O_3} & \rightarrow & & \rightarrow & O_6 \\
\end{align*} \]
True Experimental Designs

Posttest Only Control Group Design
To evaluate a situation that cannot be pretested.

\[ R \longrightarrow X \rightarrow O_1 \]
\[ R - \rightarrow O_2 \]
Quasi-Experimental Designs

Nonrandomized Control Group Pretest-Posttest Design

To investigate a situation where random selection and assignment are not possible.

\[ O_1 \xrightarrow{\text{X}} O_2 \]
\[ O_3 \xrightarrow{\text{}} O_4 \]
Quasi-Experimental Designs

Time Series Experimental Design

To determine the influence of a variable introduced only after a series of initial observations and only where one group is available.
Quasi-Experimental Designs

Control Group Time Series Design

To bolster the validity of the previous design with the addition of a control group.
Quasi-Experimental Designs

Equivalent Time Series Design

A variant of the previous design with purpose of controlling history in time designs.
Correlational and Ex Post Facto Designs Designs

Casual-Comparative Correlational Studies
To seek for cause-effect relationships between two sets of data.

\[ O_A \not\leq O_B \]
Correlational and Ex Post Facto Designs Designs

Ex Post Facto Studies

To search backward from consequent data for antecedent causes.

Origin

Other Possible Direction

Direction of the Research Effort

Other Possible Direction