



Research Designs



The design is the structure of any scientific work. It gives direction and

systematizes the research. Different types of research designs have different advantages and disadvantages.

The method you choose ^[1] will affect your results and how you conclude ^[2] the findings. Most scientists are interested in getting reliable ^[3] observations that can help the understanding of a phenomenon.

There are two main approaches to a research problem:

- Quantitative Research ^[4]
- Qualitative Research ^[5]

What are the difference between Qualitative and Quantitative Research ^[6]?

EXPLORABLE
Quiz Time!

Quiz: Psychology 101 Part 2

Quiz: Psychology 101 Part 2

Quiz: Flags in Europe

[See all quizzes =>](#)

Different Research Methods

There are various designs ^[1] which are used in research, all with specific advantages and disadvantages. Which one the scientist uses, depends on the aims ^[7] of the study and the nature of the phenomenon:

Descriptive Designs

Aim: Observe and Describe

- [Descriptive Research](#) [8]
- [Case Study](#) [9]
- [Naturalistic Observation](#) [10]
- [Survey](#) [11], also see our [Survey Guide](#) [12]

Correlational Studies

Aim: Predict

- [Case Control Study](#) [13]
- [Observational Study](#) [14]
- [Cohort Study](#) [15]
- [Longitudinal Study](#) [16]
- [Cross Sectional Study](#) [17]
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Semi-Experimental Designs

Aim: Determine Causes

- [Field Experiment](#) [19]
- [Quasi-Experimental Design](#) [20]
- [Twin Studies](#) [21]

Experimental Designs

Aim: Determine Causes

- [True Experimental Design](#) [22]
- [Double-Blind Experiment](#) [23]

Reviewing Other Research

Aim: Explain

- [Literature Review](#) [24]
- [Meta-analysis](#) [25]
- [Systematic Reviews](#) [26]

Test Study Before Conducting a Full-Scale Study

Aim: Does the Design Work?

- [Pilot Study](#) [27]

Typical Experimental Designs

Simple Experimental Techniques

- [Pretest-Posttest Design](#) [28]
- [Control Group](#) [29]
- [Randomization](#) [30]
- [Randomized Controlled Trials](#) [31]
- [Between Subjects Design](#) [32]
- [Within Subject Design](#) [33]

Complex Experimental Designs

- [Factorial Design](#) [34]
- [Solomon Four-Group Design](#) [35]
- [Repeated Measures Design](#) [36]
- [Counterbalanced Measures Design](#) [37]
- [Matched Subjects Design](#) [38]
- [Bayesian Probability](#) [39]

Which Method to Choose?

What design you choose depends on different factors.

- What information do you want? The [aims](#) [7] of the study.
- The nature of the phenomenon - Is it feasible to collect the data, and if so, would it be [valid/reliable](#) [40]?
- How [reliable](#) [3] should the information be?
- Is it [ethical](#) [41] to conduct the study?
- The cost of the design
- Is there little or much current scientific theory and literature on the topic?

Survey Guide

The full guide - [How to create a Survey / Questionnaire](#) [12]

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Planning a Survey

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Questions and Answers

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- [Survey Response Scales](#) [51]
- [Survey Response Formats](#) [52]

Types of Surveys

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Conducting the Survey

- [Pilot Survey](#) [62]
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After the Survey

- [Analysis and Handling Survey Data](#) [65]
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- [Presenting Survey Results](#) [67]

Resources

- [Questionnaire Example](#) [68]
- [Questionnaire Checklist](#) [69]

Further Reading

- ["Research Design: Qualitative, Quantitative, and Mixed Methods Approaches"](#) [70] by John W. Creswell
- ["Essentials of Research Design and Methodology"](#) [71] by Geoffrey R Marczyk

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