

Research Designs

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Different 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 will affect your results and how you conclude the findings. Most scientists are interested in getting reliable observations that can help the understanding of a phenomenon.

There are two main approaches to a research problem:

- Quantitative Research
- Qualitative Research

What are the difference between Qualitative and Quantitative Research?



The banner features a bright orange background. At the top center is a white icon of a flask with three bubbles above it, followed by the word "EXPLORABLE" in a white, sans-serif font. Below this, the phrase "Quiz Time!" is written in a white, cursive script. Underneath, there are three white-bordered rectangular boxes. The first box contains a black and white photo of a pair of red roller skates on a wooden deck, with the text "Quiz: Psychology 101 Part 2" below it. The second box contains a photo of several colorful pens or pencils fanned out, with the text "Quiz: Psychology 101 Part 2" below it. The third box contains a photo of a Ferris wheel against a sunset sky, with the text "Quiz: Flags in Europe" below it. In the bottom right corner of the banner, the text "See all quizzes =>" is written in white.

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](#) [2] of the study and the nature of the phenomenon:

Descriptive Designs

Aim: Observe and Describe

- [Descriptive Research](#) [3]
- [Case Study](#) [4]
- [Naturalistic Observation](#) [5]

- [Survey](#) [6], also see our [Survey Guide](#) [7]

Correlational Studies

Aim: Predict

- [Case Control Study](#) [8]
- [Observational Study](#) [9]
- [Cohort Study](#) [10]
- [Longitudinal Study](#) [11]
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Semi-Experimental Designs

Aim: Determine Causes

- [Field Experiment](#) [14]
- [Quasi-Experimental Design](#) [15]
- [Twin Studies](#) [16]

Experimental Designs

Aim: Determine Causes

- [True Experimental Design](#) [17]
- [Double-Blind Experiment](#) [18]

Reviewing Other Research

Aim: Explain

- [Literature Review](#) [19]
- [Meta-analysis](#) [20]
- [Systematic Reviews](#) [21]

Test Study Before Conducting a Full-Scale Study

Aim: Does the Design Work?

- [Pilot Study](#) [22]

Typical Experimental Designs

Simple Experimental Techniques

- [Pretest-Posttest Design](#) [23]
- [Control Group](#) [24]
- [Randomization](#) [25]
- [Randomized Controlled Trials](#) [26]
- [Between Subjects Design](#) [27]
- [Within Subject Design](#) [28]

Complex Experimental Designs

- [Factorial Design](#) [29]
- [Solomon Four-Group Design](#) [30]
- [Repeated Measures Design](#) [31]
- [Counterbalanced Measures Design](#) [32]
- [Matched Subjects Design](#) [33]
- [Bayesian Probability](#) [34]

Which Method to Choose?

What design you choose depends on different factors.

- What information do you want? The [aims](#) [2] of the study.
- The nature of the phenomenon - Is it feasible to collect the data, and if so, would it be [valid/reliable](#) [35]?
- How [reliable](#) [36] should the information be?
- Is it [ethical](#) [37] 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](#) [7]

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Types of Surveys

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Conducting the Survey

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After the Survey

- [Analysis and Handling Survey Data](#) [61]
- [Conclusion of a Survey](#) [62]
- [Presenting Survey Results](#) [63]

Resources

- [Questionnaire Example](#) [64]
- [Questionnaire Checklist](#) [65]

Further Reading

- ["Research Design: Qualitative, Quantitative, and Mixed Methods Approaches"](#) [66] by John W. Creswell
- ["Essentials of Research Design and Methodology"](#) [67] by Geoffrey R Marczyk

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