ACE Quick Guide: Methodology Term Buster

When developing a methodology for your research, there is an extensive range of **new terminology** for you to learn and understand. Below is a list of **key terms** you may come across when developing your methodology, along with **a simplified, easy-to-understand definition.**

Term	Definition
Methodology	Overall approach to planning and conducting research, including the rationale and justification for this chosen approach.
Research Design	Structured plan or framework that outlines a strategy for data collection and analysis.
Research Philosophy / Paradigm	Set of beliefs or assumptions about the nature of reality and how knowledge is created and understood. The chosen research philosophy underpins the methodology and research design.
Research Methods	Tools used to collect and analyse data, e.g. interviews, focus groups, surveys and questionnaires.
Quantitative Research	Research that collects and analyses numerical data to measure variables, test hypotheses and identify patterns or relationships. The focus is on quantifying data and using statistical techniques to draw conclusions.
Qualitative Research	Research that focuses on understanding how individuals perceive, interpret and make sense of their experiences, behaviours and reality using non-numerical data.
Mixed Methods	A combination of both quantitative and qualitative approaches to data collection.

Research Aim	Statement that describes the overall purpose of the research and what it sets out to achieve.
Research Objectives	Series of specific, clear and measurable steps that explain how the research aim will be achieved.
Sampling Methods	Techniques used to select participants for your study. Sampling methods can be divided into two broad categories: probability sampling and non-probability sampling.
Data Analysis	Systematic process of examining and interpreting data that has been collected to draw conclusions and propose recommendations. Your chosen method of data analysis will be informed by your research philosophy, research design, and whether you have used quantitative, qualitative or mixed research methods.
Research Ethics	Set of guiding principles and rules that aims to protect the welfare of participants and the integrity of the research.
Hypothesis	Predictive statement developed for quantitative research that is tested through the collection and analysis of data. The outcome of the research can either support or reject the hypothesis.
Variables	Characteristics, values, attributes or behaviours that are of interest to the researcher. Quantitative research aims to understand the relationship between different variables. There are many different types of variables, e.g. dependent, independent, moderating, mediating, extraneous.
Postivism	Research philosophy that views reality as both measurable and observable, and that this reality is independent of human perception. As such, this philosophy mostly utilises quantitative research methods.

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Interpretivism	Research philosophy that views reality as subjective and socially constructed; multiple realities can exist simultaneously as individuals' experiences of reality vary. As such, this philosophy mostly utilises qualitative research methods to gain a deeper understanding of individuals' perceptions and experiences.
Action Research	Often considered its own research philosophy, action research uses qualitative research methods to simultaneously investigate and solve an issue within a community, organisation or group of people.
Limitations	Constraints of the chosen methodology that potentially impact findings.
Assumptions	Conditions, beliefs or premises the researcher deems to be true for the purpose of conducting the research. These assumptions cannot be tested or fully controlled within the research design.
Scope	Outlines the boundaries of the research, determining what is included and what is excluded. For example: What is being studied? Who or what is included in this? Where does this take place? What is the time scale?
Reflexivity	Consideration of how the researcher's background, beliefs and experiences impact the research process and findings.
Thematic Analysis	Method for analysing qualitative data that focuses on identifying patterns or 'themes' in the data.
Descriptive Statistics	Method for analysing quantitative data that summarises the research sample using tools such as mean, median and mode and standard deviation.
Inferential Statistics	Method for analysing quantitative data that makes inferences and predictions about the wider population using tools such as t-tests, ANOVA, correlation and regression.

(Adapted from Rehman and Alharti, 2016; Bell and Waters, 2018; Jansen and Warren, 2025; Sheffield Hallam University, 2025a; Sheffield Hallam University, 2025b; Sheffield Hallam University, 2025c)

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Reference List

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Additional Resources

The ACE Quick Guide to Writing a Methodology provides further guidance on how to plan and write the methodology section of your dissertation.

The ACE Quick Guide to Writing a Research Question provides a step by step guide to developing and refining a research question for your dissertation.

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