Types of Research

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Conducting effective research begins with a clear understanding of its fundamental types and classifications. Researchers must choose an approach that aligns with their objectives, the nature of the problem, and the type of data required. Whether aiming to explore new knowledge, solve practical issues, or test existing theories, selecting the right research type ensures validity, relevance, and impact. Below is an overview of the main types of research commonly used across academic and professional disciplines.

In the field of academic and applied research, understanding the various types and approaches is essential for selecting the most appropriate methodology. Different research classifications—such as primary vs secondary, quantitative vs qualitative, applied vs basic, descriptive vs causal, and deductive vs inductive—serve distinct purposes depending on the research questions, objectives, and contexts. Each type contributes uniquely to knowledge creation, problem-solving, or decision-making. The following comparison table outlines these research types, highlighting their key characteristics and differences to support better-informed research design and implementation.

A brief explanation of each types of research:

1. Primary vs Secondary Research

(Saunders, Lewis, & Thornhill, 2019)

1.1 Primary research involves collecting original data firsthand through methods like surveys, interviews, or experiments.
1.2 Secondary research uses existing data collected by others, such as academic articles, reports, or databases.

Example: Conducting interviews (primary) vs analyzing journal articles (secondary).

2. Quantitative vs Qualitative Research

(Creswell & Creswell, 2018)

2.1 Quantitative research focuses on numerical data and statistical analysis (e.g., surveys with Likert scales).
2.2 Qualitative research explores non-numerical data such as opinions, experiences, or behaviors (e.g., interviews or focus groups).

Example: Using a questionnaire to measure customer satisfaction (quantitative) vs conducting open-ended interviews (qualitative).

3. Applied vs Basic Research

(Neuman, 2014)

3.1 Applied research solves specific, practical problems.
3.2 Basic (or fundamental) research seeks to expand theoretical knowledge without immediate practical use.

Example: Testing a new teaching method in classrooms (applied) vs studying how memory works (basic).

4. Descriptive vs Causal Research

(Malhotra, 2010)

4.1 Descriptive research aims to describe characteristics of a population or phenomenon (e.g., market demographics).
4.2 Causal research investigates cause-effect relationships through experiments or controlled studies.

Example: Surveying consumer preferences (descriptive) vs testing how price changes affect sales (causal).

5. Deductive vs Inductive Research

(Bryman & Bell, 2015).

5.1 Deductive research starts with a theory or hypothesis and tests it with data.
5.2 Inductive research begins with observations and develops new theories from patterns found.

Example: Testing a hypothesis about student performance (deductive) vs observing learning patterns and building a new theory (inductive).

A comparison table:

Type	1	2	Key Difference
1. Research Source	**Primary Research** Data collected firsthand (e.g., surveys, interviews)	**Secondary Research** Data from others' work (e.g., articles, reports)	Original data vs existing data
2. Research Method	**Quantitative Research** Structured, measurable	**Qualitative Research** Unstructured, exploratory	Numbers/statistics vs words/meanings
3. Purpose	**Applied Research** Practical, immediate application	**Basic Research** Academic, theoretical focus	Solves real-world problems vs builds theoretical knowledge
4. Design	**Descriptive Research** Observational, survey-based	**Causal Research** Experimental, identifies cause-effect	Describes "what is" vs explains "why/how it happens"
5. Reasoning Logic	**Deductive Research** Top-down approach: theory → data	**Inductive Research** Bottom-up approach: data → theory	Test theory vs generate theory

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