Research Methods

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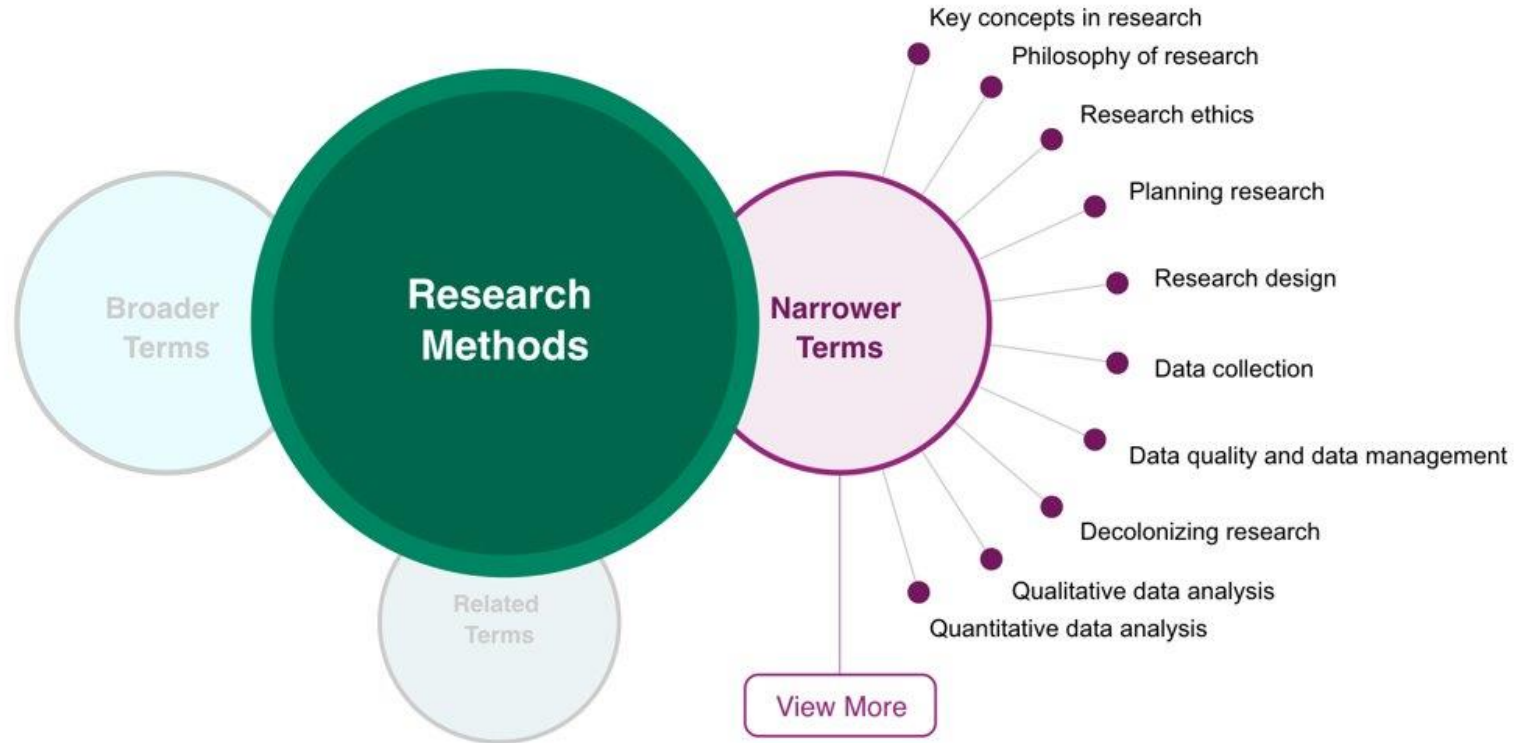
Research Methods

Research Methods are systematic approaches used to collect, analyze, and interpret information to answer questions or explore phenomena.

In design, research methods support:

- Frame and test ideas
- Explore user interaction and material behaviour
- Reflect critically on practice

Research Methods

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Broader Terms

Research Methods

Narrower Terms

Related Terms

Key concepts in research

Philosophy of research

Research ethics

Planning research

Research design

Data collection

Data quality and data management

Decolonizing research

Qualitative data analysis

Quantitative data analysis

View More

https://methods.sagepub.com/

Research Methods

Research Methods are characterized by being:

- **Rigorous:** based on evidence

- **Reflective:** involves critical thinking

- **Responsive** – aligned to context and users
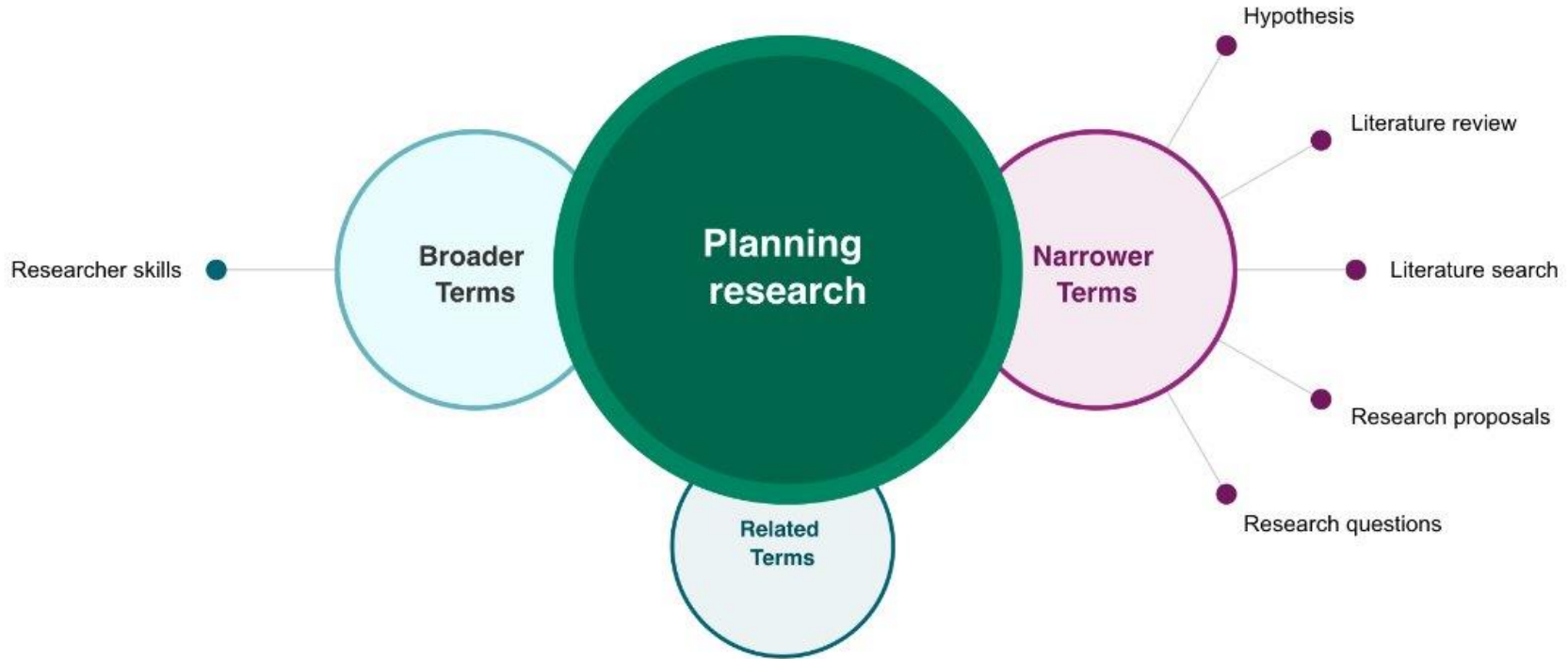
Research Methods

Types	Purpose	Common Methods
Qualitative	Exploring Meanings and experiences	Interviews, observations, case studies
Quantitative	Measuring variables and testing hypotheses	Surveys, experiments, statistical analysis
Mixed Methods	Combining qualitative and quantitative approaches	Combined use of both methods, either in sequence or simultaneously

Considerations for Using Research Methods in Design

Key questions to guide method selection:

- What is the research question?

- What kind of knowledge is sought—measurable, experiential, speculative?

- Who are the users/stakeholders involved?

Considerations for Using Research Methods in Design

Design Research

Design research is a systematic inquiry aimed at generating knowledge about or through design practices.

– Bruce Archer (1979): Advocated for design as a distinct discipline, emphasizing its unique methodologies and epistemologies.

– Archer (1995) described research as "systematic inquiry whose goal is communicable knowledge."

Design Research

Design research is a systematic inquiry aimed at generating knowledge about or through design practices. It is characterized by being:

- Systematic and methodical
- Transparent and replicable
- Ethically conducted
- Aimed at contributing to a broader knowledge base

Design research often involves iterative processes, prototyping, and reflective practice.

Christopher Frayling (1993): Introduced three categories:

- Research into design
- Research for design
- **Research through design**

Research through Design (RtD):

A research approach where designing is central to the inquiry process.

- Inquiry happens through the design process

- Artifacts and reflection produce knowledge

- Iterative, reflective, and often non-linear

- Combines making, documenting, and theorizing

Practice-based research Methods

Practice-based research is common in design, art, architecture, performing arts, and creative disciplines. It emphasizes the creation of new knowledge through the process and outcomes of creative or professional practice. The most commonly used research methods in practice-based research are:

REFLECTIVE PRACTICE
Systematic self-reflectionon practice
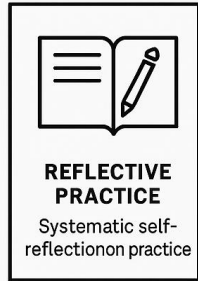
– Reflective Practice: systematic self-reflection on one's own practice.

Purpose: to articulate tacit knowledge and insights gained during the process (research journals, reflective logs, narrative accounts.

ARTISTIC OR DESIGN PRACTICE AS INQUIRY
Creating as a method for inquiry

– Artistic or Design Practice as Inquiry: the act of creating (e.g., a design, artwork, prototype) becomes the method itself.

Purpose: supports an exploratory and iterative approach to knowledge production.

Practice-based research Methods

VISUAL ETHNOGRAPPHY/ OBSERVATION
Observing environments, users, or behaviors.
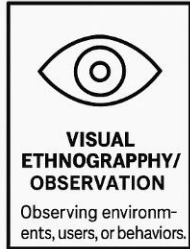
– Ethnography / Observation: observing environments, users, or behaviors, often using visual media like photos or video.

Purpose: To understand how people interact with designed artifacts or spaces.

AUTOETHNOGRAPHY
Using personal experience for exploration
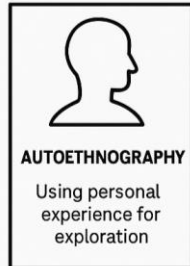
– Autoethnography: using personal experience to explore cultural and social contexts.

Purpose: to uncover hidden dimensions of practice or researcher positionality.

ACTION RESEARCH
Collaborative, problem-solving research

– Action Research: collaborative, cyclical research focused on solving real-world problems.

Purpose: In community or participatory design settings where practitioners are part of the system.

Ethical Considerations in Design Research

- Informed Consent

- Confidentiality

- Respect for participants

- Transparency in reporting

References

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