

Research Instrument Examples

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What is a Research Instrument?

A **Research Instrument** is a tool used to collect, measure, and analyze data related to your research interests. These tools are most commonly used in health sciences, social sciences, and education to assess patients, clients, students, teachers, staff, etc. A research instrument can include interviews, tests, surveys, or checklists.

The Research Instrument is usually determined by researcher and is tied to the study methodology.

This document offers some examples of research instruments and study methods.



Choosing a Research Instrument

The following list is an example of the steps to complete a research project. Choosing a **Research Instrument** is done after conceptualization and the units of analysis have been chosen, and before operationalizing concepts construct instruments:

1. Select a topic
2. Formulate a thesis statement
3. Choose the types of analyses
4. Research and write a literature review
5. Formulate the research questions
6. Conceptualize a topic, refine thesis
7. **Choose research method and research instrument**
8. Operationalize concepts construct instruments
9. Formulate the data collection strategy
10. Perform a pilot study
11. Collect data
12. Prepare the data for processing & analysis
13. Process & analyze data
14. Interpret & make inferences about data
15. Write the research paper
16. Publish data

Characteristics of a Good Research Instrument

- Valid and reliable
- Based on a conceptual framework, or the researcher's understanding of how the particular variables in the study connect with each other
- Must gather data suitable for and relevant to the research topic
- Able to test hypothesis and/or answer proposed research questions under investigation
- Free of bias and appropriate for the context, culture, and diversity of the study site
- Contains clear and definite instructions to use the instrument



Types of Research Instruments: Interviews

Interviews or the interaction where verbal questions are posed by an interviewer to elicit verbal responses from an interviewee.

Structured Interview: A formal set of questions posed to each interviewee and recorded using a standardized procedure.

Unstructured Interview: A less formal set of questions; the interviewer modifies the sequence and wording of questions.

Non-Directive Interview: An unguided interview, including open-ended questions and use of spontaneous engagement.

Focus Interview: An emphasis on the interviewees subjective and personal responses where the interviewer engages to elicit more information.

Focus Group Interview: A group of selected participants are asked about their opinion or perceptions concerning a particular topic.

Types of Research Instruments: Observations

Observation (watching what people do) is a type of correlational (non-experimental) method where researchers observe ongoing behavior.

Structured Observations: Research conducted at a specific place, time, where participants are observed in a standardised procedure. Rather than writing a detailed description of all behaviors observed, researchers code observed behaviors according to a previously agreed upon scale.

Naturalistic Observation: The study the spontaneous behavior of participants in natural surroundings. The researcher simply records what they see in whatever way they see it.

Participant Observation: A variation on natural observations where the researcher joins in and becomes part of the group they are studying to get a deeper insight into their lives.

Types of Research Instruments: Surveys

Survey research encompasses any measurement procedures that involve asking questions of respondents. The types of surveys can vary on the span of time used to conduct the study. They can be comprised of cross-sectional surveys and/or longitudinal surveys. Types of questions asked in surveys include:

Free-Answer: Also referred to as open-ended questions, these include unrestricted, essay, or unguided questions.

Guided Response Type: Recall-type questions asking the participant to recall a set of categories. Multiple-choice or multiple response questions.



If you have questions or concerns about the rights of a research subject, you should contact the Institutional Review Board (IRB) (the human research ethics committee) at 212-678-4105 or email IRB@tc.edu or you can write to the IRB at Teachers College, Columbia University, 525 W. 120th Street, New York, NY 10027, Box 151. The IRB is the committee that oversees human research protection for Teachers College, Columbia University.