

# Research methods

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## **Audit trail**

The systematic presentation of material gathered within a naturalistic study that allows others to follow and audit the researcher's thinking and conclusions about the data.

## **Attrition**

A reduction in the number of participants during the course of a study. If more participants withdraw from one group than another group, this can introduce bias and threaten the internal validity of the research.

## **Action research**

A multi-stage type of research, in which a problem is researched, changes are made, the problem is researched again, more changes are made, and so on until the problem is solved.

## **Ad hoc**

A one-off survey done for a specific client

## **Audience Research**

Shares its techniques with market research and social research but focuses on audiences and communications. Mainly used by broadcast media, publishers, network computing, and community organizations. To many people these days, media research has an identical meaning.

## **Audience Response Cultivation**

A group of methods for use mainly by broadcasters: not quite formal market research, not quite marketing, but something between the two. See also dialogue techniques.

## **Business to Business**

Research whose respondents are businesses rather than consumers. The same as industrial research

## **Bias**

Any influence that distorts the results of a research study

## **Bracketing**

A process used by researchers working to identify their preconceived beliefs and opinions about the phenomenon under investigation in order to clarify how personal biases and experience might influence what is seen, heard and reported.

## **Categorical variable**

A variable with discrete values (e.g. a person's gender or a person's marital status)

## **Central tendency**

A measure of the typicality or centrality of a set of scores; the three main measures of central tendency are mean, median and mode.

## **Census**

Survey of a whole population. Most countries have a Population Census (with a capital C) every 5 or 10 years, but a researched population can be much smaller. Thus a census (with a small c) of all staff of an organization would be a survey where everybody was sampled.

## **Central Location**

A type of research method where respondents are all interviewed at one venue - as opposed to having interviewers go out and interview respondents in their own places.

## **Charrette**

A workshop, often lasting several days, which involves a community in its urban planning process. Similar to a clinic or a search conference

## **Clinic**

A type of research, usually done at a central location, where a product is displayed and respondents asked to use it and react to it.

## **Communication research**

An umbrella term for market research, social research, media research and audience research combined.

## **Cluster sampling**

A probability sampling strategy involving successive sampling of units (or clusters); the units sampled progress from larger ones to smaller ones (e.g. health authority/health board, trust, senior managers).

## **Convenience sampling (also referred to as accidental sampling)**

A non-probability sampling strategy that uses the most easily accessible people (or objects) to participate in a study. Purposive/purposeful sampling: a non-probability sampling strategy in which the researcher selects participants who are considered to be typical of the wider population (sometimes referred to as judgmental sampling).

## **Co-discovery conference**

A method of qualitative research (developed by Dennis List, founder of Audience Dialogue) in which audience and producers discover each other's needs and use this knowledge to plan new programs. Based on the search conference and consensus group

## **Consensus group**

A type of group discussion, similar to a focus group, in which participants try to form a consensus on an issue. In contrast to surveys, which seek differences between people, this technique (originated and developed by our founder Dennis List) seeks similarities.

## **Content analysis**

Analysing the content of media - e.g. publications and broadcast programs to determine the main themes being represented. This is a quantitative technique, which usually involves counting the number of times a word or theme appears.

## **Customer satisfaction measurement**

A rapidly growing branch of market research: assessing the satisfaction level of an organization's customers.

## **Coding**

A procedure for transforming raw data into a standardised format for data analysis purposes. Coding qualitative data involves identifying recurrent words, concepts or themes. In positivist research, coding involves attaching numerical values to categories.

## **Confidence interval**

A confidence interval identifies a range of values that includes the true population value of a particular characteristic at a specified probability level (usually 95%).

## **Confounding variable**

A variable, other than the variable(s) under investigation, which is not controlled for and which may distort the results of experimental research.

## **Constant comparative method**

A procedure used during grounded theory research whereby newly gathered data are continually compared with previously collected data in order to refine the development of theoretical categories.

## **Content analysis**

A procedure for organising narrative, qualitative data into emerging themes and concepts

## **Continuous variable**

A variable that can take on an infinite range of values along a specific continuum (e.g. weight, height)

## **Control**

Processes employed to hold the conditions under which an investigation is carried out uniform or constant. In a true experimental design, the control group is the group that does not receive the

intervention or treatment under investigation. The scores on the dependent variable for the control and the experimental groups are used to evaluate the effect of the independent variable. In other experimental designs, this group may be referred to as the comparison group.

### **Core category**

The central category that is used to integrate all the categories identified in grounded theory research.

### **Correlation**

The degree of association between two variables. A tendency for variation in one variable to be linked to variation in a second variable

### **Correlation coefficient**

A measure of the degree of relationship between two variables. A correlation coefficient lies between +1.0 (indicating a perfect positive relationship), through 0 (indicating no relationship between two variables) to -1.0 (a perfect negative relationship).

### **Delphi method**

A way of estimating future measures by asking a group of experts to make estimates, re-circulating the estimates back to the group, and repeating the process till the numbers converge.

### **Depth interview**

A type of qualitative research, which involves long, probing interviews without the use of a formal questionnaire. Sometimes called simply a depth: e.g. "As well as the survey we'll do 20 depths." Also known as in-depth interviews

### **Desk research**

Research done by summarizing published sources. One form of secondary research

### **Dialogue techniques**

Similar to audience response cultivation, but with a more qualitative emphasis. A systematic way of improving and making use of customer feedback. often involving a panel.

### **Data saturation**

The point at which data collection can cease. This point of closure is arrived at when the information that is being shared with the researcher becomes repetitive and contains no new ideas, so the researcher can be reasonably confident that the inclusion of additional participants is unlikely to generate any new ideas.

### **Deductive reasoning**

A logical process of developing specific predictions (hypotheses) from general principles. This type of reasoning moves from the general to the particular.

## **Dependent variable**

In experimental research, the dependent variable is the variable presumed within the research hypothesis to depend on (be caused by) another variable (the independent variable); it is sometimes referred to as the outcome variable.

## **Descriptive statistics**

Statistical methods used to describe or summarise data collected from a specific sample (e.g. mean, median, mode, range, standard deviation).

## **Determinism**

The belief that everything is caused by specified factors (antecedent factors) in a predictable way rather than haphazardly; a key assumption within the positivist paradigm.

## **Ethno methodology**

Systematic study of the ways in which people use social interaction to make sense of their situation and create their 'reality'. This research methodology, associated with sociology, focuses on how people understand their everyday activities.

## **Ethnography**

A type of qualitative research which treats a group of people as an anthropologist would an unknown tribe, with detailed descriptions of how they live

## **Experimental research**

A research methodology used to establish cause-and-effect relationships between the independent and dependent variables by means of manipulation of variables, control and randomisation. A true experiment involves the random allocation of participants to experimental and control groups, manipulation of the independent variable, and the introduction of a control group (for comparison purposes). Participants are assessed before and after the manipulation of the independent variable in order to assess its effect on the dependent variable (the outcome).

## **Experimental group**

In experimental research the group of subjects who receive the experimental treatment or intervention under investigation.

## **Event survey**

A type of audience research, where people attending an event (concert, sports match, etc) are surveyed. More commonly known as a visitor survey

## **Focus group**

A common type of group discussion, in which a moderator encourages a small group of people (usually 8 to 10) to gradually focus on a topic

## **Field notes**

Notes taken by researchers to record unstructured observations they make 'in the field' and their interpretation of those observations.

## **Focus group**

An interview conducted with a small group of people to explore their ideas on a particular topic.

## **Group discussion**

A generic type of qualitative research in which a small group of people provide information by discussing a topic. Some variants are the consensus group, focus group, nominal group, co-discovery conference.

## **Grounded theory**

A research approach used to develop conceptual categories/theory about social processes inductively from real-world observations (data) from a selected group of people. The researcher may subsequently make further observations to test out the developed categories/theory.

## **Hypothesis**

A statement that predicts the relationship between variables (specifically the relationship between the independent and dependent variables). A hypothesis may be directional or non-directional

## **Hall test**

Getting a group of people together, e.g. in a public hall, usually to see a product demonstration and to fill in questionnaires on the spot. A type of central location study. Sometimes called a theatre test

## **Interview**

A method of data collection involving an interviewer asking questions of another person (a respondent) either face-to-face or over the telephone

## **Industrial research**

Market research on companies. Much the same as business to business research

## **Key informant interviews**

- A method of collecting information (usually factual) about a community or group of people, by finding and interviewing key informants. These are people who are likely to be well informed about an issue, and willing to answer without bias. For example, if you wanted to research TV reception in remote towns, you could telephone servicing shops. A sample of 3 per community is often enough (if they all agree). Market research, marketing research - what's the difference
- Most people don't distinguish between these two terms, but a few consider one to be broader than the other. "Marketing research" seems to be used more by academics, "market research" by commercial researchers. If there is a difference, it's very subtle. See also audience research, Media research, social research, communication research.

## **Media research**

This term seems to have developed two slightly different meanings. In the 1980s, media research referred mainly to researching the media, not their audiences. Thus media research was almost synonymous with content analysis. These days, many people use "media research" to include audience research as well.

## **Meter**

A mechanical or electronic device that can count people's behaviour. A well known example is the TV people meter

## **Monitoring**

Continuous research which regularly measures the change in some indicators. Similar to tracking

## **Mystery shopping**

A systematic way of assessing customer satisfaction, by having research staff pretend to be potential customers, and noting how frontline staff respond to their demands. Sometimes called shadow shopping. After the encounter, the interviewer fills in a questionnaire, so mystery shopping is a type of survey.

## **Mean**

A descriptive statistic used as a measure of central tendency. All scores in a set of scores are added together and divided by the number of subjects.

## **Measurement scale**

Measurement of a phenomenon or property means assigning a number or category to represent it. The methods used to display and/or analyse numerical (quantitative) data will depend on the type of scale used to measure the variable(s). There are four scales of measurement: nominal, ordinal, interval or ratio. The data associated with each measurement scale are referred to as nominal data, ordinal data, interval data and ratio data respectively.

## **Nominal scale**

The lowest level of measurement that involves assigning characteristics into categories which are mutually exclusive, but which lack any intrinsic order (e.g. classification by gender or by the colour of a person's hair or eyes)

## **Nominal group**

A type of group discussion in which participants work independently (on paper) at first, then present an idea at a time to each other.

## **Observation**

A method of data collection in which data are gathered through visual observations. A research technique in which no direct questions are asked, but people in a public place (e.g. shoppers and drivers) are watched and their behaviour recorded.

**Omnibus**

A type of survey (done regularly by most large market research companies) on which organizations can place a few specific questions. It's like a bus, on which a lot of people can travel at once.

**Opinion poll**

A type of survey in which people's opinions are asked, specially on topics related to politics.

**Panel**

A group of respondents who are surveyed a number of times, in order to detect changes in their behaviour or opinions.

**Participatory Rural Appraisal**

A qualitative method for involving communities (especially rural ones in developing countries) in their own futures. Not so much a single technique, as an approach to research.

**Poll**

Usually the same as opinion poll, but sometimes loosely used to mean any type of informal survey.

**Push polling**

A type of pseudo-research whose intention is to change opinions (usually on voting) rather than measure them. For example "When did you first become aware that Candidate A is the son of a murderer?"

**Parameter**

A characteristic of a population (e.g. the mean age of all nurses studying the MSc in Nursing by distance learning with the RCN Institute).

**Phenomenology**

A research methodology which has its roots in philosophy and which focuses on the lived experience of individuals

**Population**

A well-defined group or set that has certain specified properties (e.g. all registered midwives working full-time in Scotland)

**Positive correlation**

A relationship between two variables where higher values on one variable tend to be associated with higher values on the second variable (e.g. physical activity level and pulse rate)



## **Positivism**

This paradigm assumes that human behaviour is determined by external stimuli and that it is possible to use the principles and methods traditionally employed by the natural scientist to observe and measure social phenomena.

## **Qualitative**

Research in which questions are open-ended and results are expressed in non-numerical terms. Contrasts with quantitative research

## **Quantitative research**

Methods of research can be broadly divided into qualitative and quantitative. The basic difference is that quantitative research reports findings as numbers, while qualitative research reports them as words. The main quantitative research technique is the survey, with all its variants. There's a much wider variety of qualitative techniques - see the separate glossary for qualitative research.

## **Qualitative data**

Information gathered in narrative (nonnumeric) form (e.g. a transcript of an unstructured interview).

## **Quantitative data**

Information gathered in numeric form.

## **Quota sampling**

A non-probability sampling strategy where the researcher identifies the various strata of a population and ensures that all these strata are proportionately represented within the sample to increase its representativeness

## **RRA - Rapid Rural Appraisal**

A simpler version of Participatory Rural Appraisal, with less participation by the population involved.

## **Reception analysis**

Also known as Reception theory. A type of audience research that focuses on what audiences perceive in the media - as opposed to what broadcasters think they produce. Similar to Uses and gratifications

## **Randomisation**

The random assignment of subjects to experimental and control groups (i.e. the allocation to groups is determined by chance).

## **Randomised controlled trial (RCT)**

In a RCT, participants are randomly assigned either to an intervention group (e.g. a drug treatment) or to a control group (e.g. a placebo treatment). Both groups are followed up over a specified period

of time and the effects of the intervention on specific outcomes (dependent variables) defined at the outset are analysed (e.g. serum cholesterol levels, death rates, remission rates).

### **Random sampling**

A process of selecting a sample whereby each member of the population has an equal chance of being included.

### **Range**

A measure of variability indicating the difference between the highest and lowest values in a distribution of scores

### **Reliability**

Reliability is concerned with the consistency and dependability of a measuring instrument, i.e. it is an indication of the degree to which it gives the same answers over time, across similar groups and irrespective of who administers it. A reliable measuring instrument will always give the same result on different occasions assuming that what is being measured has not changed during the intervening period.

### **Research methodology**

Different approaches to systematic inquiry developed within a particular paradigm with associated epistemological assumptions (e.g. experimental research, grounded theory, ethno methodology).

### **Research method**

Specific procedures used to gather and analyse research data.

### **Research question**

A clear statement in the form of a question of the specific issue that a researcher wishes to answer in order to address a research problem. A research problem is an issue that lends itself to systematic investigation through research.

### **Response rate**

The proportion (percentage) of those invited to participate in a research study who actually do so.

### **Self-completion**

A questionnaire designed to be filled in by respondents - also called self-administered. Thus a self-completion survey is a survey using this type of questionnaire.

### **Single-source**

Combining different kinds of question in one survey, e.g. TV audience and product use. The opposite of fusion

## **Social research**

Uses the same techniques as market research, but focuses less on business and more on public issues. See also audience research.

## **Sugging**

A form of pseudo-research. This happens when somebody rings you up pretending to do a survey, but in fact trying to sell you something. Market research companies hate sugging, and will have nothing to do with it.

## **Survey**

A whole exercise of measuring public opinion. Don't confuse a survey with a questionnaire: some people say "The interviewer did 50 surveys" when they mean 50 interviews, for one survey. As a verb, "to survey" is used much more loosely, and often means the same as "to interview."

## **Syndicated research**

Research originated by a research company, with data sold to anybody who is interested - unlike an ad hoc survey, which is a one-off survey for an individual client.

## **Structured observation**

The researcher determines at the outset precisely what behaviours are to be observed and typically uses a standardised checklist to record the frequency with which those behaviours are observed over a specified time period.

## **Sampling bias**

Distortion that occurs when a sample is not representative of the population from which it was drawn

## **Sampling**

The process of selecting a subgroup of a population to represent the entire population. There are several different types of sampling, including: Simple random sampling This probability sampling method gives each eligible element/unit an equal chance of being selected in the sample; random procedures are employed to select a sample using a sampling frame.

## **Systematic sampling**

A probability sampling strategy involving the selection of participants randomly drawn from a population at fixed intervals (e.g. every 20th name from a sampling frame).

## **Structured interview**

The interviewer asks the respondents the same questions using an interview schedule - a formal instrument that specifies the precise wording and ordering of all the questions to be asked of each respondent.

**Sampling error**

The fluctuation in the value of a statistic from different samples drawn from the same population

**Sampling frame**

A list of the entire population eligible to be included within the specific parameters of a research study. A researcher must have a sampling frame in order to generate a random sample.

**Significance level**

Established at the outset by a researcher when using statistical analysis to test a hypothesis (e.g. 0.05 level or 0.01 significance level). A significance level of 0.05 indicates the probability that an observed difference or relationship would be found by chance only 5 times out of every 100 (1 out of every 100 for a significance level of 0.01). It indicates the risk of the researcher making a Type I error (i.e. an error that occurs when a researcher rejects the null hypothesis when it is true and concludes that a statistically significant relationship/difference exists when it does not).

**Standard deviation**

A descriptive statistic used to measure the degree of variability within a set of scores.

**Statistic**

An estimate of a parameter calculated from a set of data gathered from a sample.

**Statistical analysis**

Most statistical analysis is based on the principle of gathering data from a sample of individuals and using those data to make inferences about the wider population from which the sample was drawn.

**Statistical inference**

A procedure using the laws of probability to infer the attributes of a population based on information gathered from a sample.

**Statistical significance**

A term used to indicate whether the results of an analysis of data drawn from a sample are unlikely to have been caused by chance at a specified level of probability (usually 0.05 or 0.01).

**Statistical test**

A statistical procedure that allows a researcher to determine the probability that the results obtained from a sample reflect true parameters of the underlying population

**Subjects**

A term most often used in positivist research to describe those who participate in research and provide the data.

## **Survey research**

A research approach designed to collect systematically descriptions of existing phenomena in order to describe or explain what is going on; data are obtained through direct questioning of a sample of respondents.

## **Theme**

A recurring issue that emerges during the analysis of qualitative data

## **Theoretical framework**

The conceptual underpinning of a research study which may be based on theory or a specific conceptual model (in which case it may be referred to as the conceptual framework)

## **Theoretical notes**

Notes about the observer's interpretation of observed activities found in field notes

## **Theory**

In its most general sense a theory describes or explains something. Often it is the answer to 'what', 'when', 'how' or 'why' questions.

## **Tracking**

A series of repeated surveys in which the same questions are asked, so that a measure can be tracked over time. Often used in measuring the reach of advertising. A form of monitoring

## **Triangulation**

Taking a variety of different research approaches to an issue, as if you're seeing it from different angles. Though different methods come up with different results, the results should be similar enough that they might be plotted on a graph as a small triangle. Somewhere inside that triangle is the real truth.

## **Theoretical sampling**

The selection of individuals within a naturalistic research study, based on emerging findings as the study progresses to ensure that key issues are adequately represented

## **Unstructured interview**

The researcher asks open-ended questions which give the respondent considerable freedom to talk freely on the topic and to influence the direction of the interview since there is no predetermined plan about the specific information to be gathered from those being interviewed.

## **Unstructured observation**

The researcher uses direct observation to record behaviours as they occur, with no preconceived ideas of what will be seen; there is no predetermined plan about what will be observed.

## **Usability testing**

Originally, this referred to methods that measured the usability of electrical equipment. These days, most usability testing is of web sites, but it's also possible to test written instructions using the same methods.

## **Uses and Gratifications**

An offshoot of audience research that developed in the 1980s. Instead of studying the content, or what media to do audiences, the Uses and Gratifications people study how people use programs. For example, when children watch sitcoms without laughing, maybe they're learning how (they think) adults behave. Five main types of uses and gratifications have been defined: for information, aesthetic feelings, personal needs, social needs, and escapism.

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