**Glossary**

*Accidental sampling* A lesser-used term for convenience sampling.

*Action research* An approach that challenges the traditional conception of the researcher as separate from the real world. It is associated with smaller-scale research projects that seek to address real-world problems, particularly among practitioners who want to improve practice. Rather than a specific research method, it is more an approach to research that stresses the importance of links with real-world problems and a belief that research should serve practical ends.

*Boolean operators* Specific codes used during electronic literature searches to manipulate your search terms to achieve the best results.

*Case study* A detailed investigation of a single or small numbers of cases (e.g. an organisation, individual or event). Rather than a research method, it is more a focus of study in which a variety of research methods can be used.

*Clinical data mining* (CDM) A practice-based research strategy for systemically collecting and analysing available agency data (e.g. from medical or nursing records).

*Confidence intervals* (CIs) are usually given as 95%, indicating we would get similar results 95/100, an acceptable level for indicating statistical significance. A range of values is shown, indicating where the correct finding for a test done in a sample might lie for a real population. The narrower the CI, the more certain you can be about the accuracy of the result. For example, if the cost of treatment was estimated at £300, but the 95% CI was £10–1,000, this is a wide CI; therefore, £300 is relatively inaccurate, whereas 95% CI £290–310 would indicate that £300 was a much more accurate result.

*Content analysis* A way of analysing documents and texts. As a quantitative approach, it analyses text by measuring the frequency and prominence of specific words or phrases (e.g. stigmatising terms used in newspaper articles about asylum seekers). Qualitative versions are also used.

*Convenience sampling* A form of sampling in which you select your participants on the basis of what is immediately available. This is the least well regarded of sampling strategies.

*Data* The information that you are going to collect in order to answer your research question. In qualitative research, it is the words used by your participants or obtained in texts. In quantitative research, data are in numerical form.

*Epistemology* The study of knowledge. Every approach to research has underlying assumptions about the nature of knowledge and the social world, which is referred to as an epistemological position. Common approaches are positivism (quantitative research) and interpretivism (qualitative research).

*Focus group* A group of individuals selected to provide their opinions on a defined subject, facilitated by a moderator who aims to create an open and relaxed environment and promote interaction between participants.
**Funnelling** Used to describe a process of narrowing down of focus within a literature review. So, the writer begins with a broad discussion providing background context for the research, then moves progressively towards a much smaller and more directly relevant area of information. For example, one might move from the literature which is only marginally relevant to items that are particularly closely related to the work of the study.

**Grounded theory** An approach to research that emphasises the importance of generating new concepts and theoretical frameworks from data. Data collection and analysis happen alongside one another and data are analysed as they are collected in a continuous process. This continues until new data do not provide any new insights – the point known as theoretical saturation. Key theorists include Glaser, Strauss and Corbin.

**Hypothesis** Refers to a theoretical statement about the relationship between two or more variables that predicts an expected outcome. It may be derived from your reading of the literature, a theory or your own observations and experience and must be able to be tested.

**Interpretivism** A broad term to describe a range of epistemological approaches that challenge the traditional scientific approach of positivism. Interpretivism argues that the research methods of the natural sciences are inappropriate to study social phenomena because they do not take into account the viewpoints of the social actors involved.

**Interview schedule** A list of questions that you intend to ask in an interview. The equivalent for focus groups is called a discussion guide.

**Literature review** A comprehensive summary and critical appraisal of the literature that is relevant to your research topic. It presents the reader with what is already known in this field and identifies traditional and current controversies as well as weaknesses and gaps in the field.

**Literature search** Refers to the process of identifying texts that are appropriate using electronic or manual searches. Often treated as if it were synonymous with literature review.

**Meta-analysis** Simply means ‘overview’. It is used in research to indicate a secondary research technique where the results from many different research studies are combined and amalgamated to give an overview of the subject. Statistical meta-analysis indicates a range of techniques used to combine the results of quantitative studies, usually controlled trials, to give an overview of the effect size of some form of intervention or treatment, meaning whether the new treatment is effective or not. Statistical meta-analysis thus gives greater power as an overview of many studies than can be achieved in smaller studies. It is a central component to the systematic review of the literature, although not all systematic reviews will contain statistical meta-analysis. As well as statistical methods, narrative methods, also known as meta-synthesis techniques, can be used to tell the ‘story’ of qualitative research studies, where it is not possible to use mathematical techniques, or when studies are too dissimilar to be combined statistically.

**Methodology** Refers to the totality of how you are going to undertake your research. It consists of the research approach that you will use and the specific research methods you will choose.

**Multi-stage cluster sampling** A sampling strategy that can be used when a sample is geographically spread. Cluster sampling enables you to group together potential participants and randomly select different sites.
**Operationalisation** The process of how to convert an abstract concept into a quantifiable measure through deciding which indicators to use when measuring a particular variable.

**Participatory action research (PAR)** A form of action research that is committed to the involvement of those who are most affected by the issues being studied. It challenges the traditional power imbalance between the researcher as ‘expert’ and research participant as ‘passive subject’ and is highly compatible with anti-discriminatory and anti-oppressive practice.

**Population** Refers to the total group of people or other units (e.g. documents) that are being researched.

**Positivism** A view of knowledge in which the methods of the traditional natural sciences are seen as appropriate to the study of social reality. It stresses objectivity and seeks to establish causal relationships. Founded by the sociologist Auguste Comte, it has been influential in quantitative social research.

**Probability or random sampling** Uses mathematical techniques based upon probability theory to select research participants who are representative of the overall population. It is the most commonly used sampling approach used in questionnaire research and randomisation increases the likelihood that the results will be generalisable to a wider population. It has many forms, including simple random sampling, simple stratified sampling and multi-stage cluster sampling.

**Protocol** A protocol is another name for a research proposal: it is a plan of how the study will be run, and includes sections on background and literature review, methodology and methods, ethical issues, milestones and costings.

**Purposive sampling** (otherwise known as judgemental sampling) A popular approach used in qualitative research where participants are chosen because they possess relevant characteristics for the research questions, such as particular experience or knowledge. The aim is to produce theoretical and interesting data rather than statistically generalisable findings.

**Qualitative research** Emphasises words as data, such as the words of participants in an interview or written data from documents. Rather than seeking to develop specific testable hypotheses, qualitative research seeks to explain the meaning of social phenomena through exploring the ways in which individuals understand their social worlds.

**Quantitative research** Tends to emphasise quantification and measurement, which can be analysed using statistical tests to establish causal relationships between variables. Tends to be influenced by positivism as a traditional scientific model, which emphasises ‘objectivity’ by seeking to remove the values and attitudes of the researcher from the study. Sampling issues are particularly important because of the emphasis on being able to create statistical generalisations that are applicable to the wider population.

**Quota sampling** A procedure in which the researcher decides to research groups or quotas of people from specific subsections of the total population. Common categories are demographic such as age, gender and ethnicity, but they could be related to the research topic.

**r correlation.** This is the Pearson product-moment correlation coefficient (called r, rho or denoted by the Greek symbol ρ), and is a test of the relationship between two variables. Values range...
between +1 (an absolute positive relationship) and −1 (an absolute negative relationship). A value of (say) +0.8 would indicate that (say) as we got older we got richer (if those were our variables of interest) whereas −0.8 would indicate that as we got older we got poorer. 0.9 would indicate a very strong relationship, 0.1 a very weak one. Pearson’s r is thus used to measure of the strength of linear dependence between two variables. It is usually reported with a p value to indicate statistical significance. So a result of p=0.001, r = 0.9 would indicate a strongly positive relationship which was also statistically significant.

**Randomised controlled trial (RCT)** A classical experimental design, in which participants are randomly assigned to one of two groups: an experimental group and a control group. The experimental group receives the intervention while the control group does not, and the effects are then measured in each group.

**Reflexive/reflexivity**: The conscious engagement on the part of the researcher in being open to and expressing their own biases and opinions which may affect the carrying out and interpretation of the research.

**Reliability** A measure of how consistent or stable a particular measure is.

**Research approach** Refers to your overall view of research. A key distinction is between quantitative and qualitative research approaches. Quantitative research uses information in numerical form and has traditionally been influenced by a scientific worldview, most usually positivism. It stresses objectivity and seeks causal explanations. Qualitative research tends to use data in the form of words and seeks to explain the meaning of social phenomena through understanding the ways in which individuals make sense of their social worlds.

**Research method** Refers to the practical ways that you are going to use to collect your data. The four most commonly used methods in student research are interviews, questionnaires, focus groups and documentary analysis. Each method has a separate chapter.

**Research participants** Replaces the outmoded term ‘research subjects’ because the latter term suggests that people involved in research should have a passive role in a process to which they are ‘subjected’. The term ‘participants’ suggests a more active and equal role, in which participation is informed and freely chosen.

**Sampling** Refers to the process of selecting the participants or other data sources (e.g. documents) that will be involved in your study. Your sample (the selection of people or other data sources) is chosen from the total possible data sources, known as the population. Sample refers to the segment of the population that is selected for the research study. Sampling frame refers to a list of all members of the population being researched (e.g. a list of all students at a university or every nurse on the NMC register).

**Simple random sampling** The most basic form of random sampling in which cases are selected randomly. Each unit of the population has an equal chance of being included in the sample and this method eliminates human bias.

**Simple stratified sampling** This recognises the different strata in a population and aims to select a representative sample by ensuring each section is appropriately represented.
Snowball sampling A technique where the researcher selects a small number of participants and asks them to recommend other suitable people who may be willing to participate in the study. This is appropriate when participants are difficult to identify and contact, such as sex workers or people who are homeless.

Standard deviation Indicates the variability of a data set, showing the extent of dispersion there is from the mean. A low standard deviation (SD) shows that data are clustered around the mean; a high SD shows that data are spread out or widely dispersed.

Statistical significance Is used to indicate whether findings from quantitative research studies answer the hypothesis (questions) posed in the research study, by indicating whether the tests used on the sample in the study would give results that apply to a population, if repeated.

Surveys Used to study large groups or populations, usually using a standardised, quantitative approach to identify beliefs, attitudes, behaviour and other characteristics. Questionnaires form a key research method for collecting survey data, but surveys can use a range of methods, such as highly structured, face-to-face or telephone interviews.

Systematic review A form of literature review that uses an explicit and transparent set of formal protocols that seek to minimise the chances of systematic bias and error. Usually commissioned by governmental or national bodies such as the National Institute for Health and Clinical Excellence (NICE) in order to provide guidance about specific areas of practice.

Systematic sampling A variation of the simple random sample in which cases are selected in a systematic way (e.g. choosing every 10th case).

t-test There are several forms of t-test, but generally they are used to compare the distribution of means in samples as a way of assessing whether the samples are statistically similar or not. This might be useful in a controlled trial to assess whether the results from the control group were statistically similar to those of the treatment group or not. If they were the same, it might indicate that the treatment was no more effective than the placebo, for example.

Thematic analysis A popular method for analysing qualitative data by identifying patterns of meaning. It is a versatile and flexible approach that can be used with a range of different qualitative approaches.

Theoretical sampling A type of non-probability sampling in which the sample is chosen because it is anticipated to illustrate and lead to further refinement of a theoretical issue. Developed as part of grounded theory, it has been argued that it is effectively synonymous with purposive sampling. Rather than predetermine the number of participants, researchers will carry on interviewing participants until ‘saturation’ has been achieved, where no significantly new data is being produced and the themes have been exhausted.

Validity Refers to whether what we are measuring is what we think we are measuring.

Variables Attributes that can take on different values with different cases and could include your participants’ attitudes, beliefs, behaviour, knowledge or some other characteristic.