Quantitative and Qualitative research in more detail

Quantitative: surveys, panels, experiments, observation

Qualitative: groups, depths, ethnography, workshops

Typical uses	▪ Describing size, frequency, behaviour; ▪ Segmenting, clustering; ▪ Testing, predicting; ▪ Correlating; ▪ Awareness; ▪ Evaluation. Requires known questions and known universe as basis for sample design.	▪ Exploring, innovating; ▪ Sorting and screening; ▪ Probing complex behaviour; ▪ Accessing the private, irrational, illogical; ▪ Explaining belief structures; ▪ Experiencing. Effective where questions & vocabulary are not known in advance. Effective where universe is not known or inaccessible on a broad scale e.g. emergent issues, the socially excluded.
Nature of questions and responses	**Who, what, when, where, how many?** • Structured questions; including closed questions. • Relatively superficial and rational responses. • Measurement, testing and validation.	**Why? What is the meaning of….** • More open and flexible questioning with probing. • Below the surface and emotional responses. • Understanding, exploration and idea generation.
Sample size	Relatively large. Aims to be representative of the target population/ statistically significant.	Relatively small. Samples are purposive – chosen for understanding

Data collection	Not very flexible – static design. Interviews and observation, standardised. More closed questions.	Flexible – emergent design. Interviews and observation, not standardised. More open-ended questions.
Data	Numbers, percentages, means Less detail or depth Nomothetic description (general principles) Context poor	Words, pictures, concepts, Detailed and in-depth Ideographic description (Rich, symbolic) Context rich
Collection instrument	Formal /questionnaire	Researcher is the interviewing instrument and therefore is part of the findings.
Type of analysis	Statistical inference possible	Creating meaning through interpretation
Reliability and validity	High reliability, low validity	High validity, low reliability
Perspective	Etic – outsider perspective; understanding phenomena from outside, using external concepts and theories	Emic – insider perspective, understanding in terms and concepts that would have meaning to the people being studied.
Underlying model of knowledge	Scientific positivist paradigm (one agreed version of reality) Replicability; Reliability; Objectivity; 'Value-free'; Knowledge is objective.	Interpretive /Constructivist (many versions of reality) Non-linear systems paradigm (interconnected, holistic) Systematic and rigorous; Knowledge is relative and socially constructed; Observer is part of the system.
Cost	Relatively low cost per respondent but relatively high project cost	Relatively high cost per respondent but relatively low project cost
Infrastructure	Dependent on extensive research infrastructure	Can operate with limited research infrastructure

Quantitative Reliability and Validity

Reliability is about the extent to which the same result can be obtained, when the same questionnaire is administered to the same type of people.

Validity is about measuring what it is supposed to measure .e.g. attitudes towards classical music. A valid questionnaire would consistently discriminate between people who like classical and those who don't.

Since validity is based on a deep understanding of the research issues, one of the uses of qualitative research before quant, is to increase the validity by improving the content of the questions.

Validity requires reliability but a questionnaire can be reliable but not valid.

Qualitative reliability and validity (quality)

Qualitative methods are often criticized for being less rigorous than quantitative methods. For those who want a comparison of how to judge qual and quant, Guba and Lincoln (1985) proposed four criteria that better reflected the underlying assumptions involved in much qualitative research.

Traditional Criteria for Judging Quantitative Research	**Alternative Criteria for Judging Qualitative Research**
Internal validity – elimination of alternative hypotheses, validity of instrument	**Credibility** – results are credible to the end user *and the participants*
external validity – generalisabilty and representativeness	**Transferability** – degree to which results can be transferred to other contexts.
Reliability – consistency of the testing instrument and procedure- repeatability	**Dependability** – accounting for how the changes in the setting account for changes in the results
Objectivity – distance between researcher and subject	**Confirmability** – the degree to which the results could be corroborated by others