Qualitative and Quantitative research

Quantitative Research

Quantitative research is about numbers and the counting and measuring of things - objective hard data. It involves the use of structured questions with a limited number of predetermined response options. Usually, a relatively large number of respondents is involved.

Qualitative Research

Qualitative research is collecting, analyzing, and interpreting data by observing what people do and/or say. It is much more subjective than quantitative research and typically uses individual interviews and focus groups where comparatively small numbers of people are interviewed in-depth.

Which should I use?

The decision of whether to choose a quantitative or a qualitative design will depend on the nature of the project; the type of information needed the context of the study and the availability of recourses (time, money, and human). The size of the population involved is very often the key.

In general, qualitative research generates rich, detailed data that contribute to in-depth understanding of the context. Quantitative research generates reliable population based data that can be statistically analysed and is well suited to establishing cause-and-effect relationships.

It is common for both approaches to be used in the same study. For example, an employee survey process might start with a multiple-choice questionnaire, followed by a series of focus groups better to understand the responses obtained. Or, a series of interviews and focus groups might be run to uncover the key issues amongst a group of service users, with the results then being generalised and tested via a questionnaire issued much more widely.

What are the practical differences?

Qualitative	Quantitative
The aim is a complete, detailed description.	The aim is an accurate, reliable explanation.
Used when the researcher has no, or very little idea of what he/she is looking for.	Used when the researcher knows clearly in advance what he/she is looking for.
Used during earlier phases of research projects.	Used during latter phases of research projects.
The design starts out quite loose and emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Researcher is the data gathering instrument.	Researcher uses tools, such as questionnaires to collect data.
Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Subjective - individuals' interpretation of events is important ,e.g., uses observation, in-depth interviews etc.	Objective – seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
Qualitative data is more 'rich', time consuming, and less able to be generalized.	Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
Results may be influenced by the researcher.	Researcher remains objectively separated from the subject matter.