

# Handout on Qualitative and Quantitative methods and data

## Session 4



<https://pixabay.com/en/heart-love-red-valentine-romantic-157895/>



<https://pixabay.com/en/pie-chart-diagram-statistics-parts-149727/>

<b>Qualitative</b>	<b>Quantitative</b>
Depth of understanding	Level of occurrence
Asks “how” and “why?”	Asks “how many?”, “how much?”
Studies motivation	Studies events
Subjective	Objective
Enables discovery	Discovery and proof
Exploratory in nature	More definitive
Interprets	Describes

### **The Difference between Qualitative Research and Quantitative Research**

Qualitative Research is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research. Qualitative Research is also used to uncover trends in thought and opinions, and dive deeper into the problem. Qualitative data collection methods vary using unstructured or semi-structured techniques. Some common methods include focus group discussions (FGDs), in-depth interviews, key informant interviews, and participation observation. The sample size is typically small, and respondents are selected to fulfill a given quota.

Quantitative Research is used to quantify the problem by way of generating numerical data or data that can be transformed into useable statistics. It is used to quantify attitudes, opinions, behaviors, and other defined variables – and generalize results from a larger sample population. Quantitative Research uses measurable data to formulate facts and uncover patterns in research. Quantitative data collection methods are much more structured than Qualitative data collection methods. Quantitative data collection methods include various forms of surveys – online surveys, paper surveys, mobile surveys and kiosk surveys, face-to-face interviews, telephone interviews, longitudinal studies, website interceptors, online polls, and systematic observations.

Source: Wyse, S. (2011). *What is the Difference between Qualitative Research and Quantitative Research?*  
<http://www.snapsurveys.com/blog/what-is-the-difference-between-qualitative-research-and-quantitative-research/>

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**Examples of qualitative and quantitative data**

	Qualitative	Quantitative
Objective	Yes, I own a computer	The chip speed of my computer is 2 GHz
Subjective	I think computers are expensive	On a scale of 1-10, my computer scores 7 in terms of its ease of use

**Advantages and Disadvantages of Qualitative and Quantitative Research**

Advantages of Qualitative Research include:

- Useful during the early stages of a study when the researcher may be unsure of exactly what will be studied or what to focus on.
- Does not need a strict design plan before it begins, which gives the freedom to let the study unfold more naturally.
- Gains more detailed and rich data in the form of comprehensive written descriptions or visual evidence, such as photographs.
- Looks at context and social meaning and how it affects individuals, which is advantageous particularly in the social sciences.

Disadvantages of Qualitative Research include:

- Researcher is heavily involved in the process, which gives the researcher a subjective view of the study and its participants.
- Researcher interprets the research according to his or her own biased view, which skews the data gathered.
- Very time-consuming and can last for months or even years.

Advantages of Quantitative Research include:

- Allows the researcher to measure and analyze data.
- Relationship between an independent and dependent variable is studied in detail, which is advantageous because the researcher is more objective about the findings of the research.
- Used to test hypotheses in experiments because of its ability to measure data using statistics.

Disadvantages of Quantitative Research include:

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- The context of the study or experiment is ignored.
- Does not study things in a natural setting or discuss the meaning things have for different people as qualitative research does.
- In some cases, a large sample of the population must be studied; the larger the sample of people researched, the more statistically accurate the results will be. As such, the timeline, complexity, and cost of the research will be increased.

Adapted from Ehow.com (2016). *Advantages and disadvantages of qualitative & quantitative research*.  
[http://www.ehow.com/info\\_8091178\\_advantages-disadvantages-qualitative-quantitative-research.html](http://www.ehow.com/info_8091178_advantages-disadvantages-qualitative-quantitative-research.html)

### Further resources:

1. Pace MySPH (2012). *Quantitative vs. Qualitative Data*.  
[https://www.youtube.com/watch?v=EcKrT\\_legoU](https://www.youtube.com/watch?v=EcKrT_legoU)

This simple, mini-tutorial will help you understand the differences between qualitative and quantitative forms of data.

2. University of London and SOAS University of London (2016). "Understanding Research Methods."  
<https://www.coursera.org/learn/research-methods>

This free massive open online course (MOOC) is about demystifying research and research methods. It will outline the fundamentals of doing research, aimed primarily, but not exclusively, at the postgraduate level. The course will appeal to those of you who require an understanding of research approaches and skills, and importantly an ability to deploy them in your studies or in your professional lives. In 2015, the course was nominated for the prestigious Guardian University Award for its innovative approach to online learning.

3. Guest, G. & Namey, E. (2015). *Public Health Research Methods*.  
[https://books.google.com/books?id=JkYXBAAAQBAJ&pg=PA481&lpg=PA481&dq=Public+Health+Research+Methods+%5Bbook%5D+guest,+g.,+namey,+e&source=bl&ots=hY\\_zx6J3tu&sig=uiOsa0KdpmXloRe45j5Ks9IZRZY&hl=en&sa=X&ved=0ahUKewi\\_38q46PXLahUKXB4KHckeDScQ6AEIRDAG#v=onepage&q=Public%20Health%20Research%20Methods%20%5Bbook%5D%20guest%2C%20g.%2C%20namey%2C%20e&f=false](https://books.google.com/books?id=JkYXBAAAQBAJ&pg=PA481&lpg=PA481&dq=Public+Health+Research+Methods+%5Bbook%5D+guest,+g.,+namey,+e&source=bl&ots=hY_zx6J3tu&sig=uiOsa0KdpmXloRe45j5Ks9IZRZY&hl=en&sa=X&ved=0ahUKewi_38q46PXLahUKXB4KHckeDScQ6AEIRDAG#v=onepage&q=Public%20Health%20Research%20Methods%20%5Bbook%5D%20guest%2C%20g.%2C%20namey%2C%20e&f=false)

*Public Health Research Methods* is a comprehensive collection of research methods used in the field of public health. This text is about providing researchers, and future researchers, with an up-to-date and comprehensive set of tools to investigate public health issues and problems, to ultimately better inform public health policy and practice. The contents of this book go beyond traditional epidemiologic approaches and cover the various research methods and technologies that are emerging in the new public health landscape.

4. Bowling, A. (2014). *Research Methods in Health: Investigating Health and Health Services, Fourth Edition*.  
<https://books.google.com/books?id=JkYXBAAAQBAJ&pg=PA481&lpg=PA481&dq=Public+Health+Res>

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This bestselling book provides an accessible introduction to the concepts and practicalities of research methods in health and health services. This new edition has been extensively re-worked and expanded and now includes expanded coverage of: Qualitative methods, Social research, Evaluation methodology, Mixed methods, Secondary data analysis, Literature reviewing and critical appraisal, and Evidence based practice. *Research Methods in Health, Fourth Edition* is an essential companion for students and researchers of health and health services, health clinicians and policy-makers with responsibility for applying research findings and judging the soundness of research.