# Research methodologies (quali quantitative methods) with lab

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***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

This course provides students an introduction to qualitative and quantitative methodologies needed for the study of social phenomena also in relation to practice of advertisement and public relations. The main aims are the following.

1. Assess the importance of research as an essential complement to the evolution of the practice of market research.
2. Understand the usefulness of methods for the decision-making process in market research.
3. Comprehend how the elements involved in quali/quanti research are defined, measured and analyzed.

The qualitative and quantitative paradigms will be introduced and compared in the light of the aims pursued by researchers. The typical research process is presented in its main phases, starting from research questions to data collection and analysis, to final steps regarding the optimization of research outputs.

The course will tackle the main techniques of qualitative (presenting multiple specific studies and exercises in the field) and quantitative social research, including survey methodologies and the development of questionnaires for data collection.

Regarding the statistical part, the course will tackle descriptive univariate and bivariate statistics, focusing on the meaning and interpretation of basic statistical outputs, as well as on their visualization through graphical representations. Students will learn how to deal with logical fallacies and information misleading related to empirical research. Students will acquire the knowledge of fundamental conceptual and empirical tools. The most popular programs for market research will be explored in order to expand students’ skills. Nowadays, most companies, in fact, demand an experience level with basic softwares, such as Excel, and programming languages, such as Python, for analyses, visualizations, charts and reports.

***Intended learning outcomes***

1) Knowledge and understanding

Students will master the specific terminology of social research. When a research question is formulated, they will be able to choose the proper technique(s), qualitative or quantitative and understand when to use them in conjunction or separately (the ethnographic approach, individual and group interviews, etc.).

Students will be able to interpret, communicate and critically comment on descriptive analyses of statistical data. They will also be able to calculate the main descriptive statistics. Students will learn how to turn numbers into useful information to generate business insights, and how to effectively and rigorously communicate the information contained in their data.

To apply the theory, students will be assisted in a laboratory where they will apply the techniques and theories explained during classes. They will also learn how to commission research, obtaining the necessary expertise to be part of a working team to support corporate strategies, communication plans and marketing solutions.

2) Ability to apply knowledge and understanding

Students will understand how to approach the study of a social phenomenon using qualitative and quantitative methods. By the end of the course, students will be able to plan a social research project based on questionnaires and conduct all steps as far as collecting data in the field.

Moreover, starting from a set of data, students will be able to independently analyze descriptive statistics and to synthesize social phenomena through the calculation of adequate quantities, with the aid of IT tools. Students will be able to use the results of these analyses to answer research questions related to activities such as advertising, direct/internet marketing, sales promotion and public relations.

During the laboratory, students will be able to test themselves through a field project, which will include both a qualitative and quantitative part. Students will conduct research ending with a final presentation. After the creation of two advertisements of the same product, they will qualitatively and quantitatively assess their impact on specific targets.

The aim is to let them acquire analytical tools to develop a concrete research plan, identifying any potential logical fallacies, or misleading information. The laboratory will go through analysis paths, allowing students to practice with different methodologies.

3) Learning skills

Students will be able to use the knowledge and skills acquired in the course in any application that includes a phase of empirical research and data analysis.

4) Soft skills: teamwork and decision-making skills

Teamwork will allow students to test and improve their ability to work cooperatively with others during research projects and meetings. Moreover, joining brainstorming session to structure their own research project, they will improve their decision-making skills - essential to solve problems and to make rational decisions (i.e., in a company).

***COURSE CONTENT***

*Part 1. Introduction to qualitative and quantitative research methodologies*

- Paradigms of social research: epistemology and methodology

- Research design: quantitative and qualitative methods, differences and potential implementation;

- Characteristics of qualitative methods in research;

- Semi-structured interviews (life stories and life histories);

- Focus groups;

- Constructing the questionnaire;

- Sampling, detection and assessment of data quality;

- Logical biases and information misleading;

- Tests for statistical significance;

- Data sources

*Part 2. Elements of statistics with exercises in Excel/Python*

- From measuring phenomena to building statistical variables;

- Data structure (units and variables);

- Frequency distribution and cumulative frequency distributions;

- Measures of position: mode, quantiles, mean;

- Measures of variability and heterogeneity;

- Exercise sessions: Introduction to Excel/Python;

- Exercise sessions: Software implementation for univariate statistics and graphical representations;

- Bivariate statistics: joint distributions, conditional distributions, stochastic independence, conditional means, correlations, simple linear regression;

- Exercise sessions: bi-variate statistics and bi-variate graphical representations.

*Laboratory (field project)*

**Theoretical part**

During the theoretical lessons, the following topics regarding market research will be covered:

* Overview of consumption: characteristics, habits, and rituals;
* Introduction to market research: objectives, characteristics, methodologies;
* Qualitative research: in-depth interviews, focus groups, and online communities. When to use it and what are the advantages. Instructions on conducting qualitative research;
* Quantitative research: types of research, questionnaire design and programming, data cleaning, and creation of a final dataset;
* Statistical analysis techniques for market research: univariate and bivariate analysis;
* Advanced multivariate analysis for market research: regression analysis, factor and cluster analysis, correspondence analysis.

**Fieldwork**

* Presentation of research topics;
* Analysis of research question(s) ;
* Analysis of data sources;
* Selection of research design;
* Programming a quantitative questionnaire using Qualtrics software;
* Data collection:
  + Desk (quantitative and qualitative) research ;
  + Qualitative techniques (in-depth interviews, focus groups, participant observation, etc.);
  + Quantitative research instruments (primary and secondary data);
* Data cleaning and data analysis (Excel, SPSS);
* Data interpretation ;
* Summary and conclusion;
* Producing the research report.

***READING LIST***

P. Corbetta, Social research: Theory, methods and techniques. Sage, London, 2003.

A. Agresti-B. Finlay, Statistical Methods for the Social Scientists. Fourth Edition, Pearson, 2008. [*Acquista da VP*](https://librerie.unicatt.it/scheda-libro/agresti/statistical-methods-for-the-social-sciences-9781292220314-700022.html)

N. K. Malhotra (2004) Marketing Research: an applied orientation. Pearson Education.

Moore, D. S. (2010) The basic practice of statistics. Antoni Bosch Editor.

P.D. Brooker, Programming with Python for Social Scientists, SAGE Publications Ltd; 1st edition, 2019.

L. Tagliaferri, How to code in Python 3, Online Book. Digital Ocean, New York City, New York, USA.

The NLTK Book: <https://www.nltk.org/book>.

***TEACHING METHOD***

Together with the theory, in part 1 and 2 teaching hours will include supervised practical examples. Students will be invited to autonomously practice on applied exercises to improve the learning of the theory.

The laboratory will include also learning general Excel skills.

***ASSESSMENT METHOD AND CRITERIA***

The assessment of the theoretical part will be carried out through some tests, consisting of theoretical and practical questions, and exercises. These assignments will account for 40% of the final vote, while the remaining 60% of the evaluation will be carried out through a final assessment. The overall evaluation (40+60%) will be expressed out of 30; marks with honors will be given to those students obtaining 31 or 32 points.

The assessment of the Laboratory will be a group presentation (4-5 people per group) about a specific case study. Students will be evaluated on the basis of their ability to set up research, and their analysis and communication skills. The evaluation will be expressed out of 30 and marks with honours will be given to those students reaching 31 or 32 points.

Maximum participation in the laboratory and project preparation is required. In the event that any cases of free-riders are reported within the group, the project grade will be weighted based on the actual contribution made.

The final vote will be a weighted average between marks for the theoretical part (which will account for 2/3 of the final vote) and the mark of the Laboratory (which will account for 1/3).