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Research Design and Methods for Developing Individual Research Projects

Dates: 9 – 13 March 2026

Time: 9:00-11:00 am EAT

Registration Link: <https://bit.ly/4aN7C3u>

TRAINING OPEN TO GLOBAL PARTICIPATION

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(ERASMUS -EDU-2025-CBHE-STRAND 1)

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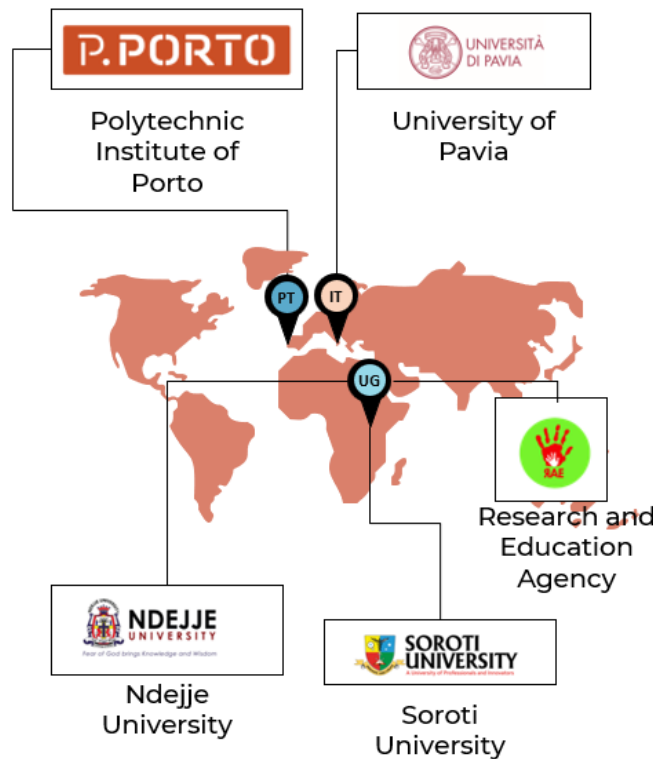
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Research Design and Methods for Developing Individual Research Projects

1. Background and Rationale

High-quality research requires a clearly articulated research problem, a well-defined and researchable question, a rigorous review of the literature, an appropriate methodological design, and valid and reliable data collection tools. Early-stage researchers often encounter difficulties in moving from a broad topic of interest to a structured, coherent, and feasible research plan. This training is designed to address this gap by providing a step-by-step, practice-oriented learning experience through which participants progressively develop their own research proposals.

The module follows the core stages of the research process, beginning with the identification of a research problem and continuing through the formulation of research questions, the development of a literature review, the selection of a research design, and the planning of data collection and analysis. Each day combines two hours of interactive teaching with extended supervised working sessions during which participants apply the concepts to their individual research projects and produce concrete outputs that contribute to the final proposal.

2. Overall Goal

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The overall goal of the training is to strengthen participants' capacity to design rigorous, coherent, and feasible research projects that are methodologically sound and academically relevant.

3. Specific Objectives

By the end of the training, participants will be able to formulate a clear and researchable research problem and translate it into a coherent set of research questions. They will develop the ability to conduct a structured literature review and to identify and justify a relevant research gap. They will gain the methodological knowledge required to select and justify an appropriate research design in line with their research questions, to define the study population and sampling strategy, and to identify suitable data sources. In addition, participants will learn how to design valid and reliable data collection tools, with particular attention to questionnaire development, and to integrate all these elements into a structured research plan.

4. Target Participants

The training is intended for PhD students and early-career researchers who are in the process of developing or refining their research proposals.

5. Training Approach and Methodology

The training is based on an interactive and highly practical approach in which short lectures introduce key concepts and are immediately followed by guided individual work.

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Throughout the programme, participants work on their own research topics and receive continuous feedback from peers and the trainer. Each thematic session leads to the production of a specific component of the research proposal, allowing participants to leave the training with a concrete and usable output.

6. Training Structure and Participants' Activities

Day 1 – From Research Idea to Research Problem and Research Question

The first day introduces the concept and importance of research design and presents the main stages of the research process. Particular attention is given to the characteristics of a strong research question and to the logical alignment between the research problem, research questions, and research objectives.

During the practical session, participants are expected to transform their general research interests into a clearly articulated problem statement that explains the context, the relevance of the study, and the specific issue to be addressed. Building on this, each participant formulates one main research question and a limited number of coherent sub-questions. The activity concludes with a peer-review exercise in which participants present their draft to a colleague and receive structured feedback, which they use to refine their formulation.

Output: Draft research problem, main research question, 3–4 sub-questions

Tasks:

- Define your broad topic

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- Write a problem statement
- Formulate: 1 main research question, Sub-questions, Short peer review in pairs

Day 2 – Literature Review and Identification of the Research Gap

The second day focuses on the role of the literature review in positioning a study within the existing body of knowledge and on the identification of different types of research gaps. Participants are introduced to search strategies, the use of academic databases, and methods for organising and synthesising the literature.

In the practical session, participants define search keywords and search strings and conduct a preliminary literature search on their topic. They are expected to identify and read a core set of relevant academic contributions and to organise them into a thematic map that highlights the main areas of agreement, debate, and underexplored issues. On this basis, each participant writes a short analytical text explaining what is known, what is not yet known, and how their study will contribute to filling the identified gap. The activity also requires them to justify the relevance, originality, and feasibility of their proposed research.

Output: Literature review map, identified research gap

Tasks:

- Define keywords and search strings
- Identify at least 8–10 relevant papers
- Create a thematic literature map
- Write: What we know, What we don't know, Your research gap, Justify the relevance and feasibility of the gap

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Day 3 – Choosing the Research Design and Data Sources

The third day examines qualitative, quantitative, and mixed-methods approaches and discusses how methodological choices are driven by the research questions. The session also addresses the identification of data sources and the definition of population and sampling strategies.

During the practical session, participants select the research approach that best fits their study and provide a written justification for this choice. They define their study population and explain the logic behind their sampling strategy, indicating how the selected sample will allow them to answer their research questions. In addition, they identify potential sources of data, whether primary or secondary, and assess their accessibility and suitability for the study. The expected output for the day is a draft methodology section describing and justifying these elements.

Output: Methodology concept note (design section)

Tasks:

- Select your research approach
- Justify the choice
- Define: Study population; Sampling method; Sample size (if relevant)
- Identify data sources (datasets, field data, etc.)

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Day 4 – Data Collection Methods and Questionnaire Design

The fourth day is dedicated to data collection methods and to the development of data collection tools, with particular emphasis on the design of questionnaires and the relationship between the conceptual framework, the research variables, and the structure of the instrument. The principles of validity, reliability, clarity, and logical sequencing of questions are discussed in detail.

During the practical session, participants develop their conceptual framework by identifying the main variables of their study and the relationships between them. Based on this framework, they design a draft data collection tool, such as a questionnaire or an interview guide, ensuring that each question is directly linked to the research objectives and can generate data suitable for the planned analysis. Participants are also expected to outline how they will pilot test the instrument in order to improve its quality.

Output: Draft data collection tool

Tasks:

- Develop your conceptual framework
- Identify: Dependent variable(s); Independent variable(s);
- Design a draft questionnaire/interview guide: Types of questions; Logical flow; Measurement scales
- Plan pilot testing

Day 5 – Data Cleaning, Analysis Plan, and Integration of the Research Proposal

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The final day addresses the planning of data cleaning and data analysis and discusses how to ensure the validity, reliability, and ethical integrity of the research process. The session also presents the standard structure of a research proposal and highlights common design weaknesses.

During the practical session, participants integrate all the components developed during the week into a coherent mini research proposal. This includes a working title, a refined research problem, clearly formulated research questions, a justified research gap, a methodology section, a description of the data collection tools, an outline of the data analysis plan, a discussion of ethical considerations, and a realistic timeline. The training concludes with short presentations in which participants present their proposals and receive collective feedback aimed at further strengthening their research design.

Final Output: Individual mini research proposal

Sections:

- Title
- Research problem
- Research questions
- Research gap
- Methodology
- Data collection tools
- Analysis plan

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- Ethical considerations

- Timeline

Final activity:

- 5-minute presentation per participant

- Group feedback

7. Expected Outputs

By the end of the training, each participant will have produced a clearly defined research problem, a set of coherent research questions, a structured review of the literature with an identified research gap, a justified research design, a draft data collection tool, a preliminary data analysis plan, and a complete mini research proposal ready for further development.

8. Duration and Time Allocation

Each day includes two hours of interactive teaching followed by three to four hours of supervised individual work dedicated to the development of the participants' own research projects.

Trainer: Prof. Maria Sassi (PhD)

University of Pavia – Italy

maria.sassi@unipv.it

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