

Outline of research training curriculum

Online training module 1:

Defining the research questions and carrying out a literature review

Topics:

- a. Types of research question
- b. Conducting a preliminary review
- c. Narrowing down the topic and creating an outline
- d. Determining potential research questions
- e. The PICOT framework for research questions
- f. How to do a literature review: purpose, search strategy, criteria for selection
- g. How to do a literature review: synthesis of literature, identifying trends, patterns and gaps, integration with research question

Deliverables: research questions with preliminary research, literature review outline

Online training module 2

Critically evaluating evidence and defining a hypothesis to be tested, research ethics

Topics:

- a. Appraising source of the evidence, research question, objectives and hypothesis
- b. Appraising study design, participants, generalizability
- c. Appraising methods, analysis, bias and confounding, results
- d. Appraising applicability and interpretation, relevance to policy and to proposed study
- e. Creating a hypothesis: directional vs non directional, null and alternative hypothesis
- f. Informed consent, ethical research design and methods, confidentiality and privacy, community and stakeholder engagement, research with vulnerable populations
- g. Conflicts of interest, publication and peer review, scientific integrity, compliance with regulations and guidelines, seeking ethics approval, post-research responsibilities

Deliverables: literature review, updated research question and hypothesis, ethical review

Online training module 3

Developing the research approach and evaluating and identifying data sources and methods

Topics:

- a. Determining research design: quantitative, qualitative and mixed methods; experimental, observational, correlational
- b. Determining research type: descriptive, exploratory, explanatory, analytical

- c. Identifying variables and measurement and linking to conceptual framework
- d. Selecting and evaluating data sources
- e. Analytical framework and data analysis plan
- f. Data integration

Deliverables: Conceptual framework, initial research proposal, including data source overview and elements from all three modules

Face to face workshop 1

Presentation of proposals, small group work on similar topics, discussion of proposal and ways to improve, follow up to training modules

Deliverables: final research proposal, approved by facilitator/coordinator and supervisor/mentor

Online training module 4

Collecting data and analyzing results

Topics:

- a. Designing surveys and interviewing techniques
- b. Observational methods and qualitative data collection
- c. Experimental methods
- d. Quantitative analytical methods: descriptive statistics
- e. Quantitative analytical methods: inferential statistics
- f. Qualitative analytical methods
- g. Mixed methods

Deliverables: Data collection strategy, analytical plan

Online training module 5

Interpreting and presenting results and writing up

Topics:

- a. Interpreting statistical evidence
- b. Interpreting qualitative evidence
- c. How to present results: tables
- d. How to present results: graphs
- e. How to present results: other visualizations and presentations
- f. Structuring the paper and academic writing conventions, how to reference
- g. Discussing limitations and writing conclusions, ethical considerations in writing results

Deliverables: outline of paper structure and how results will be presented, initial write up of findings following data collection

Online training module 6

Determining policy implications and disseminating findings

Topics:

- a. Identifying journals and journal article reporting standards, understanding the peer review process and responding to feedback
- b. Aligning research findings with policy goals
- c. Translating research into actionable policy recommendations
- d. Dissemination and communication strategies, data visualization and story telling
- e. Writing policy briefs
- f. Engaging with policymakers, advocacy

Deliverables: draft research paper and dissemination strategy

Face to face workshop 2

Presentation of drafts, small group work on creating policy briefs, discussion and critique of papers and plans to finalise, follow up to training modules

Deliverables: final research paper and policy brief plus other dissemination and research uptake material

Post training follow up

Support in finalizing paper, dissemination, submission to journals and research uptake
Creation of alumni network