



# Detailed overview of general topics in RBT courses

# A: Research design

#### A1: General research design

[Teaching materials]

UPSKILLS Moodle course First steps into scientific research

https://upskillsproject.eu/project/scientific\_research/

Movetia/ReLDI courses:

https://phil.openedx.uzh.ch/courses/course-v1:PHIL+Movetia101+2046/info (in English) https://phil.openedx.uzh.ch/courses/course-v1:PHIL+ReLDI101+2018/info (in BCMS)

#### A2: Adapting the general research design to the specific topic of interest

- A2.1: Formulation of questions and hypotheses in terms of variables
- A2.2: Formulation of predictions of H0 and H1
- A2.3: Selection of appropriate research techniques, selection and creation of corresponding data sources
  - Experimental paradigms (e.g., elicitation, judgements, forced-choice, self-paced reading)
  - Developing and exploiting databases and corpora (e.g. manual data annotation, computing inter-annotator agreement)
- A2.4: Identifying the optimal data analysis method
- A2.5: Inferring theoretical consequences from the specific data analysis results

## A3: Adapting the research design to the available research infrastructures

- A3.1 Selection of optimal research techniques, selection and creation of corresponding data sources (see also A2.3)
  - data compilation, data analysis, data archiving (e.g., XML, XLS), data reuse;
  - understanding, selecting and performing optimal statistical tests and models



### A4: Research reporting

- A4.1 Presentation modes for research reporting (short oral presentation, poster, squib, report, article etc.)
- A4.2 Established procedures and conventions in research reporting, such as:
  - the ordering of thematic units in an article/squib/report,
  - organization of the presentation,
  - amount of text and graphical items on a poster (including text size),
  - amount of text and graphical items on a slide/handout,
  - terminology,
  - citing conventions

## B: Infrastructures & techniques

#### B1: For obtaining literature

[GENERAL-PURPOSE REPOSITORY] ResearchGate, Googlescholar, Academia.edu, [DISCIPLINARY REPOSITORY] lingbuzz, ROA

- B2: For obtaining, sharing and managing data
- B2.1: Definition of research infrastructures are, and the main concepts around data interoperability, such as data, metadata and standards
- B2.2: Platforms and repositories
  - General-purpose repositories and disciplinary repositories
    - [GENERAL-PURPOSE REPOSITORY] Zenodo, FigShare
    - [DISCIPLINARY REPOSITORY] CLARIN, The Language Archive
- B2.3:Identifying, collecting, creating and/or using relevant data for research projects
  - Searching, identifying and selecting relevant corpora from language resources platforms and repositories hosting them
    - [DISCIPLINARY REPOSITORY] CLARIN, ELRC-SHARE, the Language Archive
  - Citing linguistic data sets as appropriate
  - Depositing research data in a **certified repository** and selecting an appropriate licence for sharing their data
  - The **versioning** policy of repositories
  - Familiarity with online survey tools



#### B2.4: Data management plan

- Understanding the data lifecycle
- Understanding how to generate data, analyse and handle it
- Understanding the **legal and ethical issues** around data generation and use (e.g. licensing, GDPR compliance, anonymisation, the importance of FAIR principles and Open Access)
- Secure storage and backup of research data
- Documenting workflows and what metadata to use to describe the nature of the data based on existing standards
- What data needs to be destroyed, preserved in a data repository and made available for reuse

### B3: For analysing data

- B3.1: Software for statistical tests
- B3.2: Software for conducting a phonological analysis (e.g. Praat)
- B3.3: Concordancers for the analysis of corpora