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FACULTY OF FOREIGN LANGUAGES  
DEPARTMENT OF ENGLISH  
L1 S2 – Research Methodology Lesson N°02

## RESEARCH PROCESS

### 1. Formulating the research problem

- The first step in the research process is to formulate a *clear* and *straightforward* research question.
- There are three types of research questions:
  - a) **Descriptive research questions** aim to describe what exists or what is going on.  
*Example: “What motivates English language students to learn English?”*
  - b) **Comparative/relational research questions** aim to compare the differences between two or more groups. These questions generally begin with “*what is the difference between...?*”.  
*Example: “what is the difference between how males and females learn English?”*
  - c) **Causal research questions** aim to determine whether one or more variables causes one or more outcome variables. These questions generally begin with “*what is the relationship between...?*”.  
*Example: “What is the relationship between movies and English language learning motivation among students?”*
- The selection of the type depends on the topic and the purpose of research.

NOTE: A **variable** in research simply refers to a person, place, thing, or phenomenon that you are trying to measure in some way.

### 2. Literature review

- After defining the research problem, the researcher must examine the available literature connected to the selected research problem to get themselves acquainted with the topic.
- They may review two types of literature – the **conceptual** literature concerning the concepts and theories, and the **empirical** literature consisting of previous works which are similar to the one the researcher is conducting.
- These works can be books, journal articles, doctoral dissertations, conferences, etc.

### 3. Developing the hypothesis

- After examining the available literature, the researcher should state in **clear** words the hypothesis or hypotheses.
- A hypothesis is a **predictive statement** made as a solution to a problem or an explanation of a phenomenon to be tested using scientific methods.

*Example: The higher IQ the students have, the faster they learn a foreign language.*

#### 4. Preparing the research design

- The **research design** refers to the *outline* of the entire research which covers the following major elements:
  - a) **Research sample** is a group of people, objects, or items that are taken from a larger population for measurement and research. The sample should be *representative* of the population to ensure that we can generalise the findings to the population as a whole.
  - b) **Research setting** is the *physical, temporal* and *social* context within which the research is conducted such as location (*e.g., English department of Mostaganem University*), time (*e.g., from April to June 2021*) and the level (*e.g., L1 English language learners*).
  - c) **Type of data** needs to be determined by the researcher (*e.g., primary, secondary, quantitative or qualitative data*).
  - d) **Methods of data collection** refer to the *tools* and *instruments* used by the researcher to collect data. These tools can be questionnaires/surveys, interviews, videos, audio recordings, observation sessions, experiments, document analysis (*e.g., books, articles, reports, diaries...*), etc.
  - e) **Methods of data analysis** refer to the tools that the researcher uses to analyze the collected data such as Microsoft Office Excel, SPSS, thematic analysis, summarizing, etc.

#### 5. Data collection

- After deciding in the research design which data collection methods are to be used, the researcher can start the process of data collection from the research sample.
- Data collection methods differ considerably in cost, time and other resources at the disposal of the researcher.
- It is always recommended to use more than a single data collection method in order to have a deeper understanding of the research problem.

#### 6. Data analysis and interpretation

- After collecting data through surveys, observation, interviews, etc., the researcher can start the process of data analysis and interpretation.
- The analysis of data requires a number of operations such as summarizing, categorizing, organizing in tables and graphs, etc.

#### 7. Hypothesis testing

- After analyzing the data, the researcher can test their hypothesis.
- The hypothesis can then be either *validated* or *refuted*.

#### 8. Generalization

- If a hypothesis is validated, it may be possible for the researcher to generalize the results from the sample to the whole population.

#### 9. Writing the final report

- Finally, the researcher has to prepare the report of all that has been done in the research using a particular layout: (i) *the preliminary pages*; (ii) *the main text*, and (iii) *the end pages*.

- i. **The preliminary pages** include the *front page* that carries the title of the research and the name of the researcher(s), *acknowledgements* and the *abstract*. Then there should be a *table of contents* followed by the *list of tables, graphs, abbreviations*, etc.
- ii. **The main text** should include the following:
  - (a) **Introduction:** It should contain the *scope* of the study, a clear statement of the *objective(s)* of the research, the *methodology* used in the research as well as the research *limitations*.
  - (b) **Summary of the findings:** Statement of the findings should be written in simple and concise language. If the findings are extensive, they should be summarized.
  - (c) **Conclusion:** The researcher should again put down the research findings and recommendations clearly and precisely.
- iii. **The end pages** should include the list of references (i.e., books, articles and sources that the research read and used in his research) and appendices (i.e., a copy of the survey, interview, observation sheet, etc.).