Course : Research Research methodology **Lecturer: Prof. Saliha CHELLI**

Level : Third Year **Semester: 6**

Lecture : 1

INTROCUCTION TO RESEARCH PROCESS

Lecture Objectives

By the end of this lecture, students will be able to:

- **Explain each stage of the research process clearly.**
- **Understand the logical and sequential connection between research stages.**

1. Introduction to Research

Research is a systematic, organized, and critical inquiry aimed at generating new knowledge, validating existing knowledge, or solving clearly identified problems (Creswell, 2014). In academic contexts, research is not based on intuition or opinion but on empirical evidence and logical reasoning. According to Cohen, Manion, and Morrison (2018), educational and social research seeks to describe, explain, predict, and improve phenomena related to human behavior and learning.

Key Characteristics of Academic Research

- Systematic: follows clearly defined stages and procedures
- Objective: relies on data and verifiable evidence
- Ethical: respects participants' rights and academic integrity
- Cumulative: builds on and contributes to existing knowledge

Types of Research (Overview)

- Basic research: aims at theory building and knowledge generation
- Applied research: focuses on solving practical problems
- Qualitative, Quantitative, and Mixed Methods research (Bryman, 2016)

2. Identifying the Research Problem

The research problem is the core issue, difficulty, or gap in knowledge that motivates the study. It provides direction and justification for the entire research project (Saunders, Lewis, & Thornhill, 2019). A well-defined research problem ensures that the study is focused, manageable, and academically valuable.

Characteristics of a Good Research Problem

- Clearly stated and specific
- Researchable using scientific methods
- Relevant to the discipline
- Feasible within available time and resources

Sources of Research Problems

- Gaps, inconsistencies, or limitations in previous studies
- Classroom observation or professional experience
- Societal, educational, or linguistic challenges
- Theoretical debates

3. Research Questions or Hypotheses

Once the research problem is identified, it is transformed into research questions and /or hypotheses, which guide data collection and analysis. Creswell (2014) explains that the choice between questions and hypotheses depends largely on the research approach.

Research Questions

- Common in qualitative research, open-ended and exploratory
- Aim to understand meanings, perceptions, or processes

Hypotheses

- Typical of quantitative research
- State predicted relationships between variables
- Must be testable and measurable

Examples

- Research Question: *How do undergraduate EFL students perceive peer feedback?*
- Hypothesis: *Students who receive peer feedback achieve higher writing scores than those who do not.*

4. Literature Review

The literature review is a critical synthesis of previous research relevant to the topic. It situates the current study within the existing body of knowledge and demonstrates the researcher's familiarity with the field (Bryman, 2016).

Purposes of the Literature Review

- Identify what has already been studied
- Highlight gaps, limitations, or contradictions
- Establish a theoretical framework
- Justify the need for the current research

Common Academic Sources

- Peer-reviewed journal articles
- Academic books and book chapters
- Master's theses and doctoral dissertations
- Academic databases (Google Scholar, ERIC, JSTOR)

5. Research Design

Research design refers to the overall strategy and structure used to integrate the different components of a study coherently (Creswell, 2014).

Main Research Designs

- Quantitative designs: experiments, surveys, correlational studies
- Qualitative designs: case studies, ethnography, phenomenology
- Mixed Methods designs: sequential or concurrent use of qualitative and quantitative data

Key Elements of Research Design

- Target population and sampling technique
- Research instruments
- Variables (independent, dependent, and control variables)

6. Data Collection

Data collection involves systematically gathering information needed to answer the research questions or test hypotheses. According to Cohen et al. (2018), the choice of data collection instruments must align with the research design and objectives.

Common Data Collection Instruments

- Questionnaires and surveys
- Interviews (structured, semi-structured, unstructured)
- Classroom or field observations
- Tests, documents, and records

Ethical Considerations

- Informed consent
- Confidentiality and anonymity
- Voluntary participation
- Academic honesty and avoidance of plagiarism

7. Data Analysis

Data analysis refers to the process of organizing, processing, and interpreting data to produce meaningful findings.

Quantitative Data Analysis

- Descriptive statistics (means, percentages, frequencies)
- Introductory inferential statistics (e.g., t-tests, correlations)

Qualitative Data Analysis

- Transcription and coding
- Thematic analysis
- Interpretation of patterns and meanings (Braun & Clarke, 2006)

8. Interpretation and Discussion

The discussion section explains the meaning and significance of the results, rather than merely restating them.

Results are interpreted in relation to research questions, hypotheses, and previous studies (Creswell, 2014).

Key Aspects of Discussion

- Linking findings to research objectives
- Comparing results with earlier research
- Explaining unexpected or contradictory findings

9. Conclusion and Recommendations

The conclusion provides a concise synthesis of the entire study and emphasizes its contribution to knowledge.

Components of a Strong Conclusion

- Restatement of the research purpose
- Summary of key findings
- Acknowledgment of limitations
- Recommendations for future research and practice

References

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