



UNIVERSITY OF
WESTERN MACEDONIA

Psychology Department
Doctoral Studies Program

Contemporary Issues in Psychological Inquiry

PhD Seminars



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Introduction to Research Planning and Design

Overview of Research Methodologies

- **Research Methodologies in Psychology:**
 - *Quantitative*: Focus on numerical data and statistical analysis.
 - *Qualitative*: In-depth understanding of human behavior through observation and interviews.
 - *Mixed Methods*: Combination of both quantitative and qualitative methods to explore complex phenomena.



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Quantitative Research

- **Key Characteristics:**
 - Structured research designs (e.g., experiments, surveys)
 - Hypothesis-driven
 - Generalizability of results
 - Use of statistical analysis
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- Examples: Clinical trials, correlation studies, psychometric testing



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Qualitative Research

- **Key Characteristics:**
- Focuses on subjective experiences and meaning
- Open-ended data collection (e.g., interviews, focus groups)
- Flexible design and interpretative analysis
- Examples: Case studies, thematic analysis, grounded theory



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Mixed Methods

- **Combining Quantitative and Qualitative:**
- Use quantitative data to identify trends, followed by qualitative analysis to explore underlying reasons.
- Can be conducted sequentially or concurrently.
- Addresses both breadth (quantitative) and depth (qualitative) of research questions.



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Importance of Systematic Research Planning

- **Why Plan?::**
- Clarifies research objectives
- Ensures coherence in research design
- Helps in addressing potential issues early on



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Research Planning Phases

- **Why Plan?**
- Identifying research questions
- Designing methodology
- Addressing ethical considerations



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Ethics Case Study

- **Case Scenario:** A researcher conducts an online experiment without obtaining consent. Discuss the ethical violations and possible consequences.



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Research Design Exercise Instructions

- **Activity Objective:** Present the research design for your research project
- **Instructions:**
 - Present your research questions
 - Outline methodology (quantitative, qualitative, or mixed)
 - Identify potential ethical challenges
 - Present and discuss in groups and in class



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Gender Issues In Research

Gender Biases

- Underrepresentation of women and gender-diverse populations in research samples.
- Stereotypical assumptions about gender roles influencing study outcomes.
- **Examples:** Early cognitive studies focusing exclusively on male subjects.
- Health psychology studies generalizing findings from male samples to females.



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Strategies to Address Gender Bias

- Mitigating Bias:
- Ensuring gender diversity in participant recruitment.
- Using gender-neutral language in research design.
- Including analysis of gender differences in results.

- **Examples:** Stratified sampling techniques to ensure gender balance.



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Incorporating Gender-Sensitive Approaches

- **Key Approaches:**
- Gender-inclusive questionnaires and surveys.
- Examining gender differences in psychological phenomena.
- Avoiding binary classifications of gender and considering non-binary participants



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Gender Issues Activity Instructions

- **Activity Objective:**
- **Review your research project for gender biases.**
- **Instructions:**
 - Present your research project and the research design
 - Discuss in class and try to identify potential biases in sampling, methodology, or data interpretation
 - Consider improvements to make the research gender-sensitive
 - Provide constructive feedback to others focusing on bias mitigation strategies



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Systematic Literature Review

What is a Systematic Literature Review?

- **Definition:**

- *A methodical process of collecting and critically analyzing multiple research studies or papers.*

- **Purpose:**

- Synthesizing existing knowledge.
- Identifying gaps in the literature.
- Informing research questions and methodology.



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Steps in Conducting a Systematic Review

- **Key Steps:**
- Formulating a clear research question.
- Developing inclusion/exclusion criteria.
- Comprehensive database search (PsycINFO, PubMed).
- Screening and evaluating studies.
- Synthesizing findings.



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Searching Databases Effectively

- **Tips for Effective Searches:**

- Use Boolean operators (AND, OR, NOT) to refine results.
- Utilize database-specific filters (e.g., publication year, peer-reviewed).
- Identify key terms and synonyms relevant to your topic.



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Evaluating Research Quality

- **Evaluation Criteria:**
- Study design and methodology.
- Sample size and representativeness.
- Data analysis techniques.
- Potential biases and conflicts of interest.



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Systematic Literature Review Exercise

Instructions

- **Activity Objective:**
 - Create a systematic review outline on a topic relevant with your research project
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- **Instructions:**
 - Identify key studies in your area.
 - Create a research question and outline.
 - Present your systematic review plan to the class.



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Tools for Literature Management

- **Reference Management Software:**
- Zotero: Free and easy to use for organizing research papers.
- EndNote: Robust reference management for larger research projects.
- Mendeley: Combines reference management with a research network.



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Resources at the University for Doing Research

University Resources Overview

- **Available Resources:**
- Digital libraries and research databases (e.g. Scopus).
- Statistical and research software (e.g. SPSS, NVivo).
- Research support offices for grant writing and ethics approval.



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Accessing Databases

- **Key Databases:**
- PsycINFO: A comprehensive resource for psychological literature.
- PubMed: Biomedical and life sciences literature.
- Scopus: Large multidisciplinary abstract and citation database.



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Research Grants and Funding

- **Funding Sources:**
- National and international funding bodies (e.g., IKY, H.F.R.I., Erasmus+, HORIZON etc.).
- Other funding opportunities
- Tips for successful grant applications.



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University Resources Activity Instructions

- **Activity Objective:**

- *Explore university digital resources and identify useful tools for your research.*

- **Instructions:**

- Access databases.
- Find the relevant research for your systematic review activity.
- Discuss in groups how you plan to use these resources in your research.



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Design of Digitalized Psychological Tasks and Tests

Introduction to Digital Psychological Assessments

- **Digital Tools for Psychological Research:**
- Software for designing and administering tests (e.g., Qualtrics, E-Prime, PsyToolkit).
- Data collection from remote participants.
- Automating test scoring and analysis.



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Principles of Digital Task Design

- **Key Design Principles:**
 - *Reliability*: Consistent results across administrations.
 - *Validity*: Measuring what you intend to measure.
 - *User-friendliness*: Ensuring the task is intuitive for participants.



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Ethical Considerations in Digital Testing

- **Key Ethical Issues:**
- *Informed consent*: Must be adapted for online environments.
- *Data security*: Protect participant data and ensure confidentiality.
- *Technical issues*: Ensuring fairness and accessibility for all participants.



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Hands-On Practice with Digital Tools

- Tools to Explore:
- **PsyToolkit:** Free web-based tool for designing experiments.
- **Qualtrics:** Widely used for surveys and behavioral experiments.
- **E-Prime:** Professional software for complex experimental designs.
- **Other available software**



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Digital Task Design Instructions

- **Activity Objective:**
- Design a digital psychological task for your research project.
- Instructions: Create a task using one of the available software.
- The task should assess a psychological construct relevant with your research project.
- Present the design and rationale behind the task.



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Summary and Next Steps

- **Key Takeaways:**

- Comprehensive understanding of research methodologies and gender issues in research.
- Skills in conducting systematic literature reviews.
- Utilization of university resources and digital tools.

- **Next Steps!**

- Apply these skills in your research projects.
- Seek feedback from peers and faculty.



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Thank you!



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