

# LIBRARY GUIDE

## Study Guide: Introduction to Academic Research

For Shipping & Logistics Students – Caribbean Maritime University

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### SECTION 1: OVERVIEW

#### What is Academic Research?

Academic research is a systematic, organized investigation aimed at discovering new knowledge or validating existing knowledge.

#### Key Features

- Logical and structured
  - Evidence-based
  - Objective and unbiased
  - Replicable
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### SECTION 2: THE RESEARCH PROCESS

Students must be able to explain and apply each stage:

#### 1. Identifying a Research Problem

- Focused and specific
- Relevant to your field
- Researchable with available resources

#### 2. Literature Review

- Review scholarly articles, books, and databases
- Identifies gaps in knowledge
- Helps refine your research question

#### 3. Research Questions / Hypothesis

- Research Question: Open-ended (e.g., “What factors influence...?”)
- Hypothesis: Testable prediction (e.g., “X affects Y”)

#### 4. Research Design

- Overall plan for conducting research
- Includes:
  - Methodology
  - Sampling
  - Data collection tools

#### 5. Data Collection

##### Common methods:

- Surveys
  - Interviews
  - Observations
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- Document analysis
  - 6. Data Analysis**
    - Quantitative: Statistics, graphs
    - Qualitative: Themes, coding
  - 7. Conclusion and Recommendations**
    - Interpret findings
    - Answer research question
    - Suggest improvements or further research
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## SECTION 3: TYPES OF RESEARCH

### Quantitative Research

- Numerical data
- Statistical analysis
- Large samples

Examples: Surveys, experiments

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### Qualitative Research

- Non-numerical data
- In-depth understanding
- Smaller samples

**Examples: Interviews, case studies**

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### Mixed Methods

- Combines both approaches
  - Provides comprehensive analysis
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## SECTION 4: KEY TERMS (HIGH PRIORITY)

Term	Meaning
<b>Variable</b>	A factor that can change
<b>Independent Variable</b>	The cause
<b>Dependent Variable</b>	The effect
<b>Population</b>	Entire group being studied
<b>Sample</b>	Subset of population
<b>Reliability</b>	Consistency of results
<b>Validity</b>	Accuracy of measurement
<b>Bias</b>	Systematic error
<b>Ethics</b>	Moral principles in research

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## SECTION 5: RESEARCH METHODS

### Quantitative Methods

- Structured surveys
- Experiments
- Statistical tools

#### Advantages:

- Objective
- Generalizable

#### Limitations:

- Limited depth
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### Qualitative Methods

- Interviews
- Focus groups
- Observations

#### Advantages:

- Rich detail
- Contextual understanding

#### Limitations:

- Subjective
  - Time-consuming
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## SECTION 6: ETHICS IN RESEARCH

Students must understand:

- Informed Consent – Participants must agree knowingly
  - Confidentiality – Protect participant identity
  - Integrity – No fabrication or falsification
  - Avoiding Harm – Physical, emotional, or psychological
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## SECTION 7: REFERENCING & PLAGIARISM

### Referencing Styles

- APA
- MLA
- Chicago

### Plagiarism Includes

- Copying without citation
- Improper paraphrasing
- Submitting others' work

### How to Avoid Plagiarism

- Cite all sources
  - Use quotation marks when necessary
  - Paraphrase properly
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## SECTION 8: SAMPLE EXAM QUESTIONS

### Short Answer

1. Define academic research.
  2. What is a hypothesis?
  3. State two types of research methods.
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### Essay Questions

1. Explain the stages of the research process.
  2. Compare qualitative and quantitative research.
  3. Discuss the importance of ethics in research.
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### Scenario-Based

A student conducts interviews with 10 participants to understand their experiences.

Questions:

- What type of research is this?
  - Identify one strength and one limitation
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## SECTION 9: MULTIPLE-CHOICE PRACTICE

1. Which of the following is a qualitative method?
  - A. Survey
  - B. Experiment
  - C. Interview
  - D. Statistical analysis

Answer: C

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2. What does validity refer to?
  - A. Consistency
  - B. Accuracy
  - C. Bias
  - D. Sampling

Answer: B

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3. A hypothesis must be:
  - A. Opinion-based
  - B. Testable
  - C. Broad
  - D. Descriptive

Answer: B

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## SECTION 10: QUICK REVISION SUMMARY

Before your exam, ensure you can:

- ✓ Define key concepts
  - ✓ Explain the research process
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- ✓ Distinguish research methods
  - ✓ Apply ethical principles
  - ✓ Identify plagiarism
  - ✓ Answer structured questions clearly
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## SECTION 11: EXAM STRATEGY

- Read questions carefully
  - Answer exactly what is asked
  - Use clear structure in essays:
    - Introduction
    - Body
    - Conclusion
  - Provide examples where possible
  - Manage your time effectively
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## FINAL SUGGESTION

**Strong performance depends on:**

- Clear understanding of concepts
  - Ability to apply knowledge
  - Structured and precise answers
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## Additional Support

For assistance with research or accessing resources such as past papers, visit the CMU Library or contact:

✉ **Email:** [library@cmu.edu.jm/cmulibrary123@gmail.com](mailto:library@cmu.edu.jm/cmulibrary123@gmail.com)

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