

## RESEARCH

### Brainstorming for Research Topics

- 1. Choose a topic that interests and challenges you**
  - Pick something you genuinely care about and something that will make you think. When a topic matters to you, you're more likely to stay focused, read more, and revise your work instead of rushing it.
  - Why this matters: Your attitude affects your effort. If you find the topic boring or meaningless, you may avoid researching it deeply. If you're curious about it, you will naturally ask better questions and work harder.
- 2. Select a subject you can manage**
  - A "manageable" topic is one that fits your:
    - time (deadline),
    - skills (reading/writing level),
    - resources (available books/articles/websites),
    - scope (not too wide, not too narrow).
- 3. Avoid topics that are too technical, learned, or specialized**
  - If a topic requires advanced knowledge (medical terms, engineering formulas, highly scientific methods), you might spend most of your time just trying to understand the basics—leaving little time to build a strong paper.
  - Better approach: Choose a topic you can understand now, then make it more specific and researchable.
- 4. Avoid topics with very limited sources**
  - A good research topic needs enough credible sources (books, journals, reliable websites, reports). If only a few sources exist, your paper may become repetitive or unsupported.

#### Research: What It Is

- ✓ The culmination and final product of an involved process of research, critical thinking, source evaluation, organization, and composition
- ✓ Think of it as a living thing, which grows and changes as you explore, interpret, and evaluate sources related to a specific topic
- ✓ Primary and secondary sources are the heart of a research paper, and provide its nourishment; without the support of and interaction with these sources, the research paper would morph into a different genre of writing
- ✓ Serves not only to further the field in which it is written, but also to provide with an exceptional opportunity to increase knowledge in that field.

#### Research: What It Is Not

- It is **NOT** simply an informed summary of a topic by means of primary and secondary sources.
- It is **NEITHER** a book report **NOR** an opinion piece **NOR** an expository essay consisting solely of one's interpretation of a text **NOR** an overview of a particular topic **BUT** a genre that requires one to spend time investigating and evaluating sources with the intent to offer interpretations of the texts, and not unconscious regurgitations of those sources.

- Its goal is **NOT** to inform the reader what others have to say about a topic, BUT to draw on what others have to say about a topic and engage the sources in order to thoughtfully offer a unique perspective on the issue at hand.

## Identifying the Problem and Asking the Question

After brainstorming possible topics, the next step is to make your idea clearer by identifying the specific problem you want to study and turning it into a research question. This part is important because it connects your topic to the actual parts of a research paper.

Once you know what problem you are focusing on and what question you want to answer, it becomes easier to write the key sections of the paper.

### Parts of the Research Paper

#### TITLE PAGE

- The title should describe contents clearly and precisely so that readers can decide whether to read the report.
- The title should **NOT** include wasted words such as "studies on," "an investigation of", etc. and abbreviations, jargon, and "cute" language. On the other hand, avoid using words which are too broad and do not tell the reader what is being studied such as "Philippine Politics".
- A good title should provide information about the focus of your research study.  
Examples:
  - ✓ **Good Titles** – The Relationship of Luteinizing Hormone to Obesity in the Zucker Rat
  - × **Poor Titles** – An Investigation of Hormone Secretion and Weight in Rats Fat Rats: Are Their Hormones Different?

#### CERTIFICATION & APPROVAL SHEET

#### ABSTRACT

- Extract key points from each section. Condense in successive revisions.
  - State main objectives
  - Describe methods
  - Summarize the most important results
  - State major conclusions and significance
- Do **NOT** include references to figures, tables, or sources.
- Do **NOT** include information, not in the report.

#### ACKNOWLEDGMENT

#### TABLE OF CONTENTS

#### LIST OF TABLES/FIGURES/GRAPHS

#### CHAPTER 1: INTRODUCTION

**Background of the Problem** – What is the basis of your research?

- Describe the problem investigated.
- Present relevant background or contextual materials.
- Move from general to the specific, i.e., problem in real world/research literature to your research

report.

- Be selective, **NOT** exhaustive, in choosing studies to cite and amount of detail to include.

**Theoretical & Conceptual Framework (for Quantitative Research Data)** – What fundamental structure will best support the purpose of my research?

- Reveal the plan of organization.
- Take note that a theoretical framework must also be presented as basis of the conceptual framework

**Research Hypothesis/Hypotheses** – What is your assumption on the research?

- Present null/alternative hypothesis/hypotheses for quantitative research.

**Statement of the Problem** – Based on your thesis/research statement, what do you want to understand?

- This should be in line with the purpose of the research.

**Definition of Terms** – What are the terms you used in the research that should be defined operationally?

**Importance of the Study** – What conflict or unanswered question, untested population, untried method in existing research does your experiment address? What findings of others are you challenging or extending?

- Explain the focus of the paper and its specific purpose.
- Review relevant research to provide rationale.

**Scope and Limitations/Delimitations of the Study** – What are the scope and coverage of your research?

- Present the boundaries of the research.

## CHAPTER 2: REVIEW OF RELATED LITERATURE AND STUDIES

- Use your outline and prospectus as flexible guides.
- Build your essay around points you want to make (i.e., do not let your sources organize your paper).
- Integrate your sources into your discussions (even on other chapters of the study).
- Summarize, analyze, explain, and evaluate published work rather than merely reporting it.
- Move up and down the "ladder of abstraction" from generalization to varying levels of detail back to generalization.

## CHAPTER 3: METHODOLOGY

- Do **NOT** include details of common statistical procedures.
- Do **NOT** mix results with procedures.

**Research Design** – How did you study the problem?

- Briefly explain the general type of scientific procedure used.

**Population** – What/Who are the subject of your research?

**Sampling Method** – What materials did you use in your research?

**Data Collection Procedure** – How did you execute the research?

- Explain the steps taken in conducting the research.

**Statistical Treatment of Data** – What statistical tool will you use in analyzing your quantitative research data?

**Data Analysis** – How will you analyze your qualitative research data?

## CHAPTER 4: RESULTS AND DISCUSSIONS

- Present the results for each statement of the problem cited in the introduction part through graphs, tables, and figures.
- Include the data analysis method used (for quantitative) and/or the conceptualized framework used (for qualitative) for the interpretation of the research data.

- Do **NOT** simply repeat the data from the table in your write-up.
- Emphasize important results as shown in your table, chart, etc.
- Follow the order below in constructing your research report:
  - **Explanation** of the Results
  - **Analysis/Interpretation** of the Results
  - **Justification** of the Analysis/Interpretation
  - **Implication** of the Findings
- Use your reviewed literature and studies in constructing your research report.
- You may add more citations if needed. But, make sure to include all citations in your references.
- Avoid extra and unnecessary words.

## CHAPTER 5: SUMMARY OF FINDINGS

- Do **NOT** ignore or bury the major issue – did the study achieve its goal?
- Make explanations complete and provide evidence for each conclusion.
- Discuss possible reasons for expected and unexpected findings.
- Do **NOT** overgeneralize.
- Do **NOT** ignore deviations in your data.
- Avoid speculation that cannot be tested in the foreseeable future.

**Summary** – What are the important results you obtained?

- Present the summary of your findings for each statement of the problem?

**Conclusions** – What do your observations mean?

- Summarize the most important findings for each statement of the problem.
- For each major result:
  - Describe the patterns, principles, relationships your results show.
  - Explain how your results relate to expectations and to literature cited in your Introduction. Do they agree, contradict, or are they exceptions to the rule?
  - Explain plausibly any agreements, contradictions, or exceptions.
  - Describe what additional research might resolve contradictions or explain exceptions.
- If the argument or point of your paper is complex, you may need to summarize the argument for your reader.
- If prior to your conclusion you have not yet explained the significance of your findings or if you are proceeding inductively, use the end of your paper to add your points up, to explain their significance.
- Move from a detailed to a general level of consideration that returns the topic to the context provided by the introduction.

**Recommendations** – How do your results fit into a broader context?

- Suggest what further research the topic needs.
- Suggest the theoretical implications of your results.
- Suggest practical applications of your results.
- Extend your findings to other situations.
- Give the big picture on how the findings help the readers to understand a broader topic.

## REFERENCES

## APPENDIX/APPENDICES

## Reading on Related Studies

After you have identified your research problem and formed your research question, the next step is reading on related studies. By reading related literature and studies, you build a strong background for your paper, avoid repeating what has already been done, and spot gaps or unanswered questions that your research can focus on.

### Writing Related Literature and Studies

#### Finding information

- I. *Surf the Net.* For general or background information, check out useful URLs, general information online, almanacs or encyclopedias online such as *Britannica*. Use search engines and other search tools as a starting point.

Pay attention to domain name extensions, e.g., .edu (*educational institution*), .gov (*government*), or .org (*non-profit organization*). ***These sites represent institutions and tend to be more reliable but be watchful of possible political bias in some government sites.***

Be selective of .com (*commercial*) sites. Many .com sites are excellent; however, a large number of them contain advertisements for products and nothing else. Network Solutions provides a link where you can find out what some of the other extensions stand for. Be wary of the millions of personal home pages on the Net. The quality of these personal homepages varies greatly. Learning how to evaluate websites critically and to search effectively on the Internet can help you eliminate irrelevant sites and waste less of your time.

The recent arrival of a variety of domain name extensions such as .biz (*commercial businesses*), .pro, .info (*info on products / organizations*), .name, .ws (*WebSite*), .cc (*Cocos Island*) or .sh (*St. Helena*) or .tv (*Tuvalu*) may create some confusion as you would not be able to tell whether a .cc or .sh or .tv site is in reality a .com, a .edu, a .gov, a .net, or a .org site. Many of the new extensions have no registration restrictions and are available to anyone who wishes to register a distinct domain name that has not already been taken. For instance, if *Books.com* is unavailable, you can register as *Books.ws* or *Books.info* via a service agent such as Register.com.

- II. *Find books in the Library.* Check out printed, online resources, web-based information services, or special resource materials on CDs of the following materials available in the Library:
  - a. Almanacs, Atlases, Audio-Visual Catalogs
  - b. Encyclopedias and Dictionaries
  - c. Government Publications, Guides, Reports
  - d. Magazines, Newspapers, Periodicals, and Journals
  - e. Online reference materials (including databases, e.g. SIRS, ProQuest, eLibrary such as Wall Street Executive Library, etc.)
  - f. Subject Specific software
- III. *Check out public and university libraries, businesses, government agencies, as well as contact knowledgeable people in your community.*

Read and evaluate. Bookmark your favorite Internet sites. Printout, photocopy and take notes of relevant information.

As you gather your resources, jot down full bibliographical information (**author, title, place of publication, publisher, date of publication, page numbers, URLs, creation or modification dates on Web pages, and your date of access**) on your worksheet, printout, or enter the information on your laptop or desktop computer for later retrieval. If printing from the Internet, it is wise to set up the browser to print the URL and date of access for every page. **Remember that an article without bibliographical information is useless since you cannot cite its source.**

### **Organizing Notes**

- I. *Organize all the information you have gathered according to your outline.* Critically analyze your research data. Using the best available sources, check for accuracy and verify that the information is **factual, up-to-date, and correct**. Opposing views should also be noted if they help to support your thesis/research statement.
- II. **Analyze, synthesize, sort, and digest** the information you have gathered. You must also be able to effectively communicate your thoughts, ideas, insights, and research findings to others through written words as in a report, an essay, a research or term paper, or through spoken words as in an oral or multimedia presentation with audio-visual aids.
- III. *Do not include any information that is not relevant to your topic, and do not include information that you do not understand.* Make sure the information that you have noted is carefully recorded and in your own words, if possible. **Plagiarism is definitely out of the question.** Document all ideas borrowed or quotes used very accurately. As you organize your notes, jot down detailed bibliographical information for each cited paragraph and have it ready to transfer to your Reference page.

For you to have an idea when to acknowledge, paraphrase, and quote sources, visit the website below:

➤ [https://writing.wisc.edu/Handbook/Acknowledging\\_Sources.pdf](https://writing.wisc.edu/Handbook/Acknowledging_Sources.pdf)

- IV. *Devise your own method to organize your notes.* One method may be to mark with a different color ink or use a highlighter to identify sections in your outline. For example, IA3b stands for the item "Accessing WWW" belongs in the following location of your outline:
  - I. Understanding the Internet
    - A. History of the Internet
    - B. Trends in the Internet
- V. *Group your notes following the outline codes you have assigned to your notes, e.g. IA2, IA3, IA4, etc.* This method will enable you to quickly put all your resources in the right place as you organize your notes according to your outline.

### **Writing your first draft**

- I. *Start with the first topic in your outline.* Read all the relevant notes you have gathered that have been marked.
- II. **Summarize, paraphrase or quote** directly for each idea you plan to use in your literature review. Use a technique that suits you. For example, write summaries, paraphrases, or quotations on note cards or separate sheets of paper. Mark each card or sheet of paper clearly with your outline code or reference.
- III. *Put all your note cards or papers in the order of your outline.* If using a laptop or desktop, create meaningful filenames that match your outline codes for easy cut and paste as you type up your literature review. **Do not forget to backup all your research files.**

- IV. You may also use a symbol such as "#" or "%" to mark the spot where you would like to check back later to edit a paragraph. The unusual symbol will make it easy for you to find the exact location again. **Delete the symbol once editing is completed.**

### **Revising your outline and draft**

- I. Read your paper for any content errors.
- II. Double check the facts and figures.
- III. Arrange and rearrange ideas to follow your outline.
- IV. Reorganize your outline if necessary, but always keep the purpose of your paper and your readers in mind.
- V. Re-read your paper for grammatical errors. Use a dictionary or a thesaurus as needed. Do a spell check. Use a free grammar and proofreading checker such as *Grammarly* or check out some grammar books like *The Elements of Style* by William Strunk, Jr. Correct all errors that you can spot and improve the overall quality of the paper to the best of your ability. Get someone else to read it over. Sometimes a second pair of eyes can see mistakes that you missed.
- VI. Check the following:
  - a. Overall organization – Logical flow of introduction, coherence, and depth of discussion, and effectiveness of conclusion
  - b. Paragraph level concerns – Topic sentences, sequence of ideas within paragraphs, use of details to support generalizations, summary sentences where necessary, use of transitions within and between paragraphs
  - c. Sentence level concerns – Sentence structure, word choices, punctuation, spelling

Documentation – Consistent use of one system, citation of all material not considered common knowledge, appropriate use of endnotes or footnotes, accuracy of list of works cited.

## **Understanding Ways to Collect Data**

After reading related studies, the next step is to plan how you will gather information for your own research. You may already have a clear research question, but you still need a practical and reliable way to answer it. The Methodology section explains exactly how you will collect and analyze your data, so readers can understand where your results came from and judge if your findings are believable.

### **Writing the Methodology**

- It serves as the core of the research paper.
- It fulfills one of the basic principles underlying the scientific method.
- It allows verification.
- It allows the readers to evaluate the quality of the results and make their own decision about the validity of the data.

Any scientific research paper needs to be verifiable by other researchers so that they can review the results by replicating the experiment and guaranteeing the validity. Thus, you need to provide the following:

- Completely accurate description of the equipment and the techniques used for gathering the data
- Thorough explanation of how the raw data was compiled and analyzed

The writing for the method should be clear and direct, concise and straight to the point. The major point is not to stray off into irrelevance, and this process is helped by making a few basic assumptions.

A well laid out and logical methodology will provide a great backbone for the entire research paper and will allow you to build an extremely strong results section.

The only real difficulty with the methods section is finding the balance between keeping the section short, while including all of the relevant information.

## Finding the Answers to Research Questions

This part focuses on using your **collected data** to answer your research questions clearly and correctly. Your answers must be based on **evidence**, not guesses or personal opinions.

### 1. Organize your data first

- Arrange data in a clear order (by research question, category, or theme).
- Remove information that is not related to your research questions.
- Label your data properly (e.g., Respondent 1, Interview A, Table 1).

### 2. Analyze the data

- For **quantitative data (numbers)**: compute totals, percentages, averages, or rankings.
- For **qualitative data (words/ideas)**: group answers into themes (common ideas or repeated responses).
- Look for patterns such as similarities, differences, trends, or relationships.

### 3. Interpret what the results mean

- Explain what the patterns show in simple terms.
- Connect the results to your research problem (Why is this important? What does it tell you?).
- Compare with related studies when needed (Do your results match or differ from what you read?).

### 4. Answer each research question directly

- Write one section per research question.
- State the answer clearly, then support it with evidence (data, examples, quotes, numbers).
- Avoid adding claims that are not supported by your findings.

### 5. Check the quality of your answers

- Are the answers complete and specific?
- Are they supported by evidence?
- Do they match the research questions exactly?

## Reporting Findings, Drawing Conclusions, and Making Recommendations

This part explains what you discovered from your data, what those results mean, and what actions or next steps can be suggested based on the study.

### 1. Reporting Findings (Results)

- Present the key results that directly answer each research question.
- Use clear summaries of what the data shows (tables/graphs can be added if needed).
- Include only relevant information; avoid opinions here.
- For qualitative data, you may include short quotations or examples as evidence.

### 2. Drawing Conclusions

- Explain what the findings mean in relation to the research problem.
- Summarize the most important patterns or relationships you found.

- Connect your conclusions to your research question/s and, if applicable, to related studies (whether your results agree or differ).
- Keep conclusions evidence-based: do not claim something your data cannot support.

### 3. Making Recommendations

- Suggest practical actions based on the conclusions (what should be improved, continued, or changed).
- Recommendations should be realistic, specific, and connected to the findings.
- Identify who the recommendation is for (students, teachers, school, community, etc.).
- You may include recommendations for future research (e.g., study a larger sample, use another method, explore a related factor).

#### Reference:

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