

Writing Guide for Chapter 5: Conclusion

Final Year Project (FYP) — Diploma in Civil Engineering (DKA)

FINAL CHAPTER OF THE FYP REPORT

What is Chapter 5?

Main Purpose

Chapter 5 is the closing chapter of the FYP report. It is not merely a repetition of Chapter 4, but a comprehensive summary of the entire study — connecting the objectives, methodology, and findings into one cohesive and meaningful conclusion.

Basic Principles

- Summarize the findings, do not repeat the discussion from Chapter 4
- Show the achievement of each research objective
- Present relevant improvement recommendations
- End the report with a strong conclusion

Overall Structure of Chapter 5

01

5.1 Introduction

Introduces the content of Chapter 5 and connects it with the findings from Chapter 4.

02

5.2 Research Summary

Summarizes the main findings based on each research objective (5.2.1 to 5.2.3).

03

5.3 Improvement Suggestions

Presents suggestions for methodology, design, materials, and future research.

04

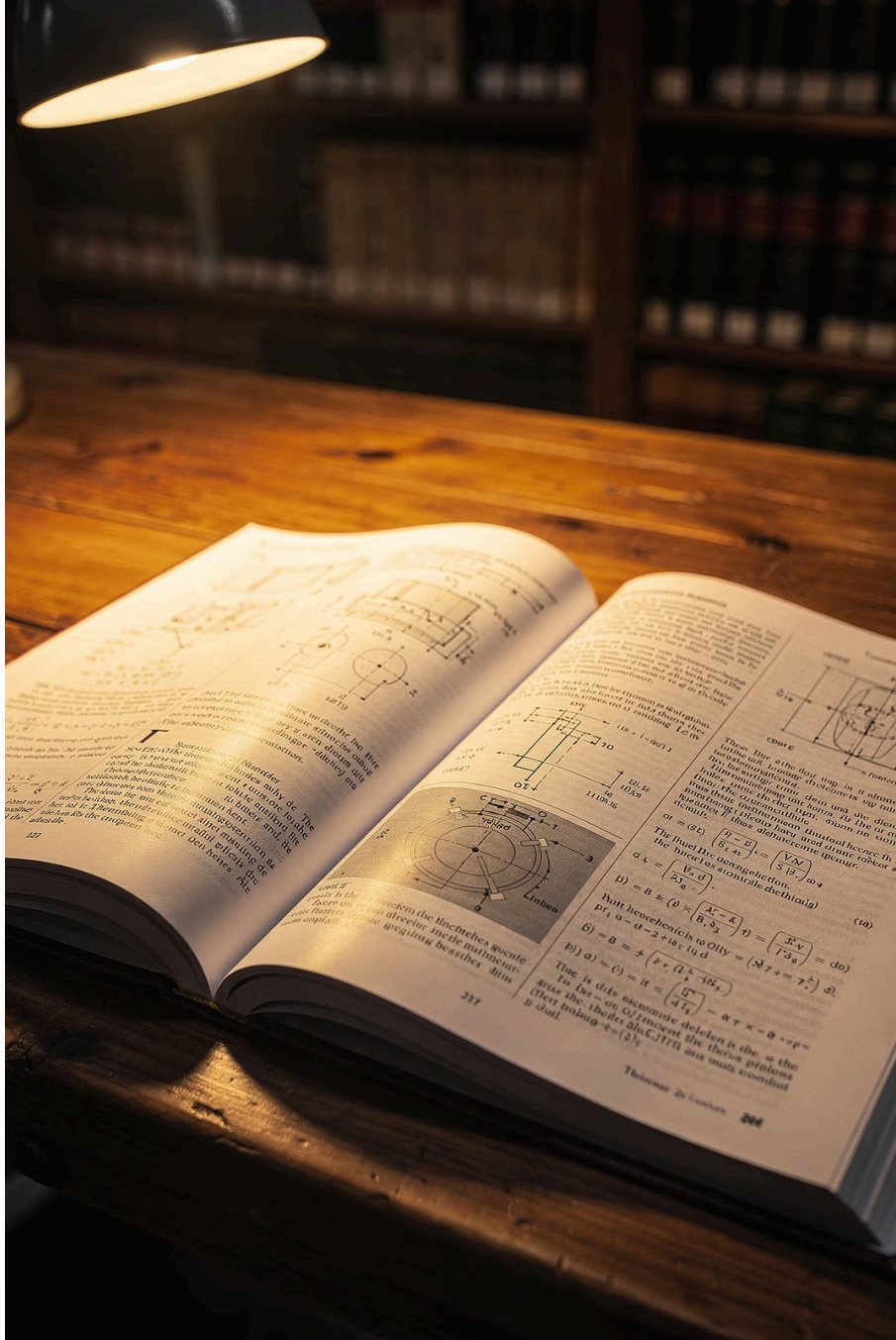
5.4 Conclusion

Provides a comprehensive closing to the entire FYP report.

Example FYP Title for This Guide

> *"The Effect of Recycled Plastic as a Partial Replacement Material in Concrete Blocks"*

Throughout this guide, the Chapter 5 structure example will refer to the FYP title above as a practical illustration to help DKA students understand how to write each section correctly and systematically.



SECTION 5.1

Introduction to Chapter 5

Purpose of This Section

Section 5.1 serves as the opening to Chapter 5. It introduces the content of this chapter, explains that the summary is based on the research findings, and directly connects Chapter 4 (Findings & Discussion) with Chapter 5 (Conclusion).

Required Content

- Brief summary of the entire project
- General overview of Chapter 5 content
- Explanation that the summary is based on the research objectives
- Explicit connection between Chapter 4 and Chapter 5

Recommended length: 1–2 paragraphs only. Keep it concise and precise.



Writing Example: Section 5.1

This chapter summarizes the overall study titled *"The Effect of Recycled Plastic as Partial Replacement Material in Concrete Blocks"*. The summary is based on the findings and discussion presented in Chapter 4, with reference to the research objectives established in Chapter 1 and the methodology used in Chapter 3. In addition to summarizing the study, this chapter also presents improvement suggestions and future research, and concludes with the overall project conclusion.

SECTION 5.2

Study Summary

Section 5.2 is the most important part of Chapter 5. Here, students summarize the main findings of the study systematically based on **each research objective** that has been set. Each sub-section (5.2.1, 5.2.2, 5.2.3) represents one research objective.

Restate the Objective

Rewrite the research objective exactly as stated in Chapter 1.

Summarize the Main Findings

Present the most significant findings related to that objective without repeating the lengthy discussion from Chapter 4.

State the Achievement

Explicitly emphasize whether the objective has been successfully achieved based on the study findings.

SECTION 5.2.1

Summary of Research Objective 1

Writing Structure

1. Restate Research Objective 1
2. Summarize the main findings related to this objective
3. State whether the objective has been achieved

Example (Recycled Plastic FYP)

Objective 1: Determine the physical properties of concrete blocks containing recycled plastic as a partial replacement.

Summary: The findings showed that the block density decreased with increasing plastic content, but still met the specified standards. **This objective has been achieved.**

SECTION 5.2.2

Summary of Research Objective 2

Writing Structure

1. Restate Research Objective 2
2. Summarize the main findings related to it
3. State whether the objective has been achieved

Example (Recycled Plastic FYP)

Objective 2: Analyze the compressive strength of the concrete block according to the percentage of plastic replacement (5%, 10%, 15%).

Summary: The highest compressive strength was recorded at 5% replacement, namely 18.4 N/mm^2. Percentages above 10% showed a significant decrease. **This objective has been achieved.**

SECTION 5.2.3

Summary of Research Objective 3

Writing Structure

1. Restate Research Objective 3
2. Summarize the related key findings
3. State whether the objective has been achieved

Example (Recycled Plastic FYP)

Objective 3: Identify the optimum percentage of recycled plastic replacement in the production of concrete blocks.

Summary: The 5% replacement rate was identified as the optimum ratio, maintaining structural strength while reducing the use of aggregate. **This objective has been achieved.**



Important Guide: Summaries Are Not Repetition

❌ Avoid This

Copying tables, graphs, or long discussions from Chapter 4 directly into Chapter 5.

✅ Do This

Focus only on the main findings. Use concise, clear, and direct sentences to state the achievement of each objective.

SECTION 5.3

Suggestions for Improvement and Future Research

This section shows the student's ability to think critically about the limitations of their study and suggest ways to improve the quality of future research. Each suggestion **must be directly related** to the findings and constraints of the study that have been identified.

Categories of Improvement Suggestions



Research Methodology

Suggest improvements to testing procedures, the use of more comprehensive standards, or more systematic data collection methods.



Product Design

Suggest improvements to the design of the product or system being studied to enhance its performance and effectiveness.



Materials and Technology

Suggest the use of alternative materials, more advanced equipment, or the latest technology to improve the quality of the findings.



Samples and Specimens

Suggest increasing the number of samples or specimens to obtain more representative data and more reliable results.

Suggestions for Further Study

Additional Testing

Suggest more comprehensive tests such as durability tests, thermal tests, or chemical tests that could not be carried out within the scope of the current study.

Real-Scale Application

Suggest implementation of the project in the field or in an actual construction project to validate laboratory findings in a more complex environment.

Constraint-Based Study

Identify the main constraints of the study (time, cost, equipment) and use them as the basis for more in-depth and comprehensive future research suggestions.



Example Proposal: Recycled Plastic FYP

Increase the Number of Specimens

This study used 3 specimens for each variation. It is recommended that future studies use at least 5 specimens for each variation to improve the statistical accuracy of the findings.

Water Absorption Test

The water absorption test was not carried out in this study due to time constraints. Future studies are recommended to assess the permeability of concrete blocks containing recycled plastic.

Use Different Types of Plastic

This study only used PET plastic. Future studies can examine the effect of using other types of plastic such as HDPE or LDPE on the mechanical properties of concrete blocks.

SECTION 5.4

Conclusion

Purpose of This Section

Section 5.4 provides the overall closing of the FYP report. It not only summarizes the study, but also emphasizes the importance of the project to the field of Civil Engineering as well as the project's contribution to industry, society, or institutions.

Mandatory Elements of the Conclusion

- Overall summary of the study
- Importance of the project to the field of Civil Engineering
- Contribution of the project to industry or society
- Emphasis that all objectives have been achieved
- Closing statement that ends the report

Suggested length: 1–2 paragraphs. Write in a confident and positive academic tone.



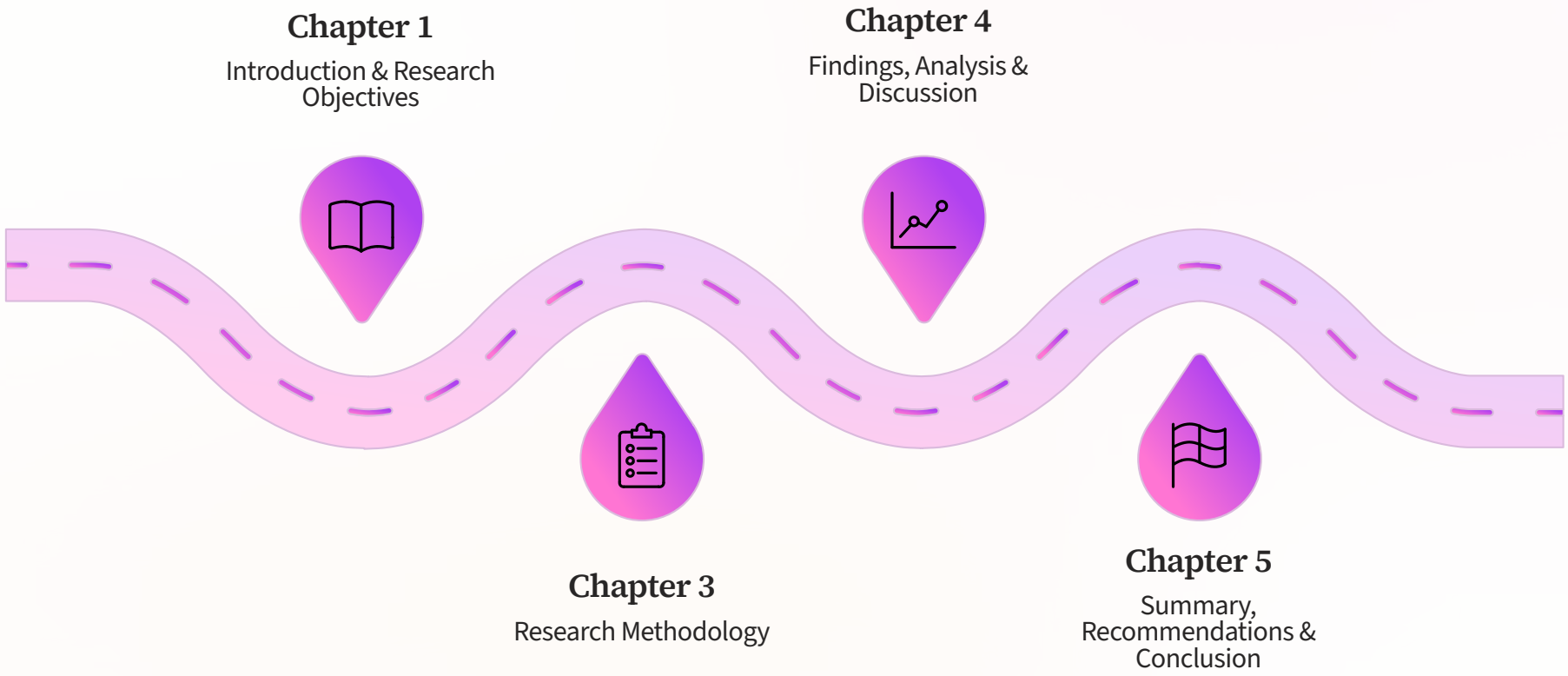
Writing Example: Section 5.4

Overall, this study has successfully achieved all three of the stated objectives. The research findings show that recycled plastic has the potential to be used as a partial replacement material in the production of concrete blocks at an optimal replacement ratio. This study makes a meaningful contribution to the field of Civil Engineering, particularly in efforts to promote sustainable construction practices that reduce the use of raw materials and address the problem of plastic waste. It is hoped that this study can serve as a foundation for more comprehensive future research for application in real construction-scale use.

Relationship Between Chapter 4 and Chapter 5

Chapter 4: Findings & Discussion	Chapter 5: Conclusion
Presents findings according to the research objectives	Summarizes findings according to the research objectives
Analyzes and discusses the results in detail	States the achievement of each objective briefly
Identifies the strengths and limitations of the study	Presents improvement suggestions based on the limitations
Discusses the implications of the findings in depth	Summarizes the overall contribution of the project

Overall Continuity of the FYP Report



Chapter 5 completes the continuity of the FYP report by connecting the initial objectives (Chapter 1), methodology (Chapter 3), and findings (Chapter 4) into a final, cohesive, and purposeful summary.

Chapter 5 Writing Guide: 4 Key Steps

Step 1: Write the Introduction

Explain the purpose of Chapter 5 and its connection to Chapter 4. Provide an overview of the chapter's content in 1–2 paragraphs.

Step 2: Summarize by Objective

For each objective, restate the objective, summarize the main findings, and emphasize whether the objective was achieved.

Step 3: Present Recommendations

Provide improvement recommendations and future research suggestions that are directly related to the limitations and findings identified in the study.

Step 4: Write the Conclusion

End with a comprehensive conclusion that emphasizes the importance of the project and the study's contribution to the field of Civil Engineering.

Common Mistakes in Writing Chapter 5

Repeating Chapter 4

Copying long discussions, tables, or graphs from Chapter 4. Chapter 5 only needs to **summarize**, not repeat.

Irrelevant Recommendations

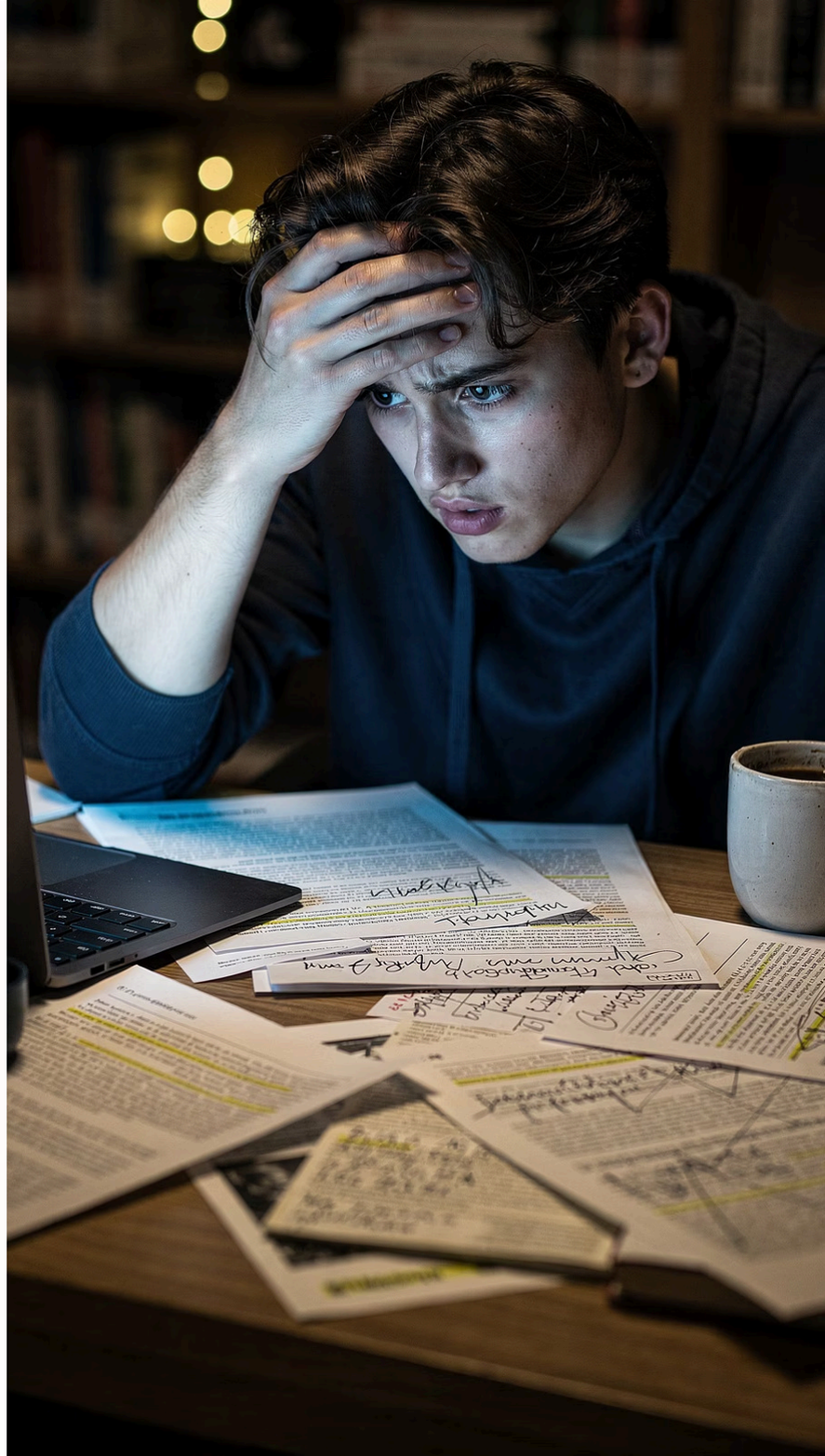
Making recommendations that are not related to the findings or limitations of the study. Every recommendation must have a clear justification.

Overly General Conclusion

Writing a vague conclusion that does not address the specific importance of the project to the field of Civil Engineering or the industry.

Objectives Not Emphasized

Failing to explicitly state whether each research objective has been achieved. A statement of achievement is required in every subsection 5.2.



Suitability of This Structure for DKA Students

Why Is This Structure Suitable?

This Chapter 5 structure is designed specifically for Diploma in Civil Engineering (DKA) students because it is concise, systematic, and shows a clear continuity between all report chapters for the FYP.

Advantages of This Structure

- **Concise:** Suitable for diploma-level research scope
- **Systematic:** Follows the standard engineering report format
- **Clear:** The relationship between chapters is easy for examiners to follow
- **Comprehensive:** Covers all FYP assessment elements

Summary of Chapter 5 Structure

Seksyen 5.1 Pengenalan



Menghubungkan Bab 5 dengan Bab 4.

Seksyen 5.2 Rumusan Kajian



Tiga sub-seksyen untuk tiga objektif.

Seksyen 5.3 Cadangan



Penambahbaikan metodologi & reka bentuk.

Seksyen 5.4 Kesimpulan



Sumbangan, kepentingan, pencapaian objektif.

Pre-Submission Checklist

- [x] ~~5.1 Introduction is written in 1–2 paragraphs that connect Chapter 4 with Chapter 5~~
- [ ] 5.2.1 Research Objective 1 is restated, findings are summarized, and achievement is emphasized
- [ ] 5.2.2 Research Objective 2 is restated, findings are summarized, and achievement is emphasized
- [ ] 5.2.3 Research Objective 3 is restated, findings are summarized, and achievement is emphasized
- [ ] 5.3 Improvement suggestions and further research are presented with clear justification
- [ ] 5.4 Conclusion emphasizes the project's importance, contribution to the field, and achievement of all objectives
- [ ] Chapter 5 does not repeat lengthy discussion from Chapter 4
- [ ] All suggestions are directly related to the findings and limitations of the study

Conclusion: Write Chapter 5 with Confidence

Chapter 5 is your final opportunity to demonstrate a thorough understanding of the study you have carried out. By following a systematic structure — introduction, summary by objective, improvement suggestions, and a strong conclusion — you can produce a final year project report that is complete, cohesive, and of high quality.

> Remember: a good Chapter 5 is not the longest one, but the most precise, concise, and clearly connected across all the chapters of your report.

