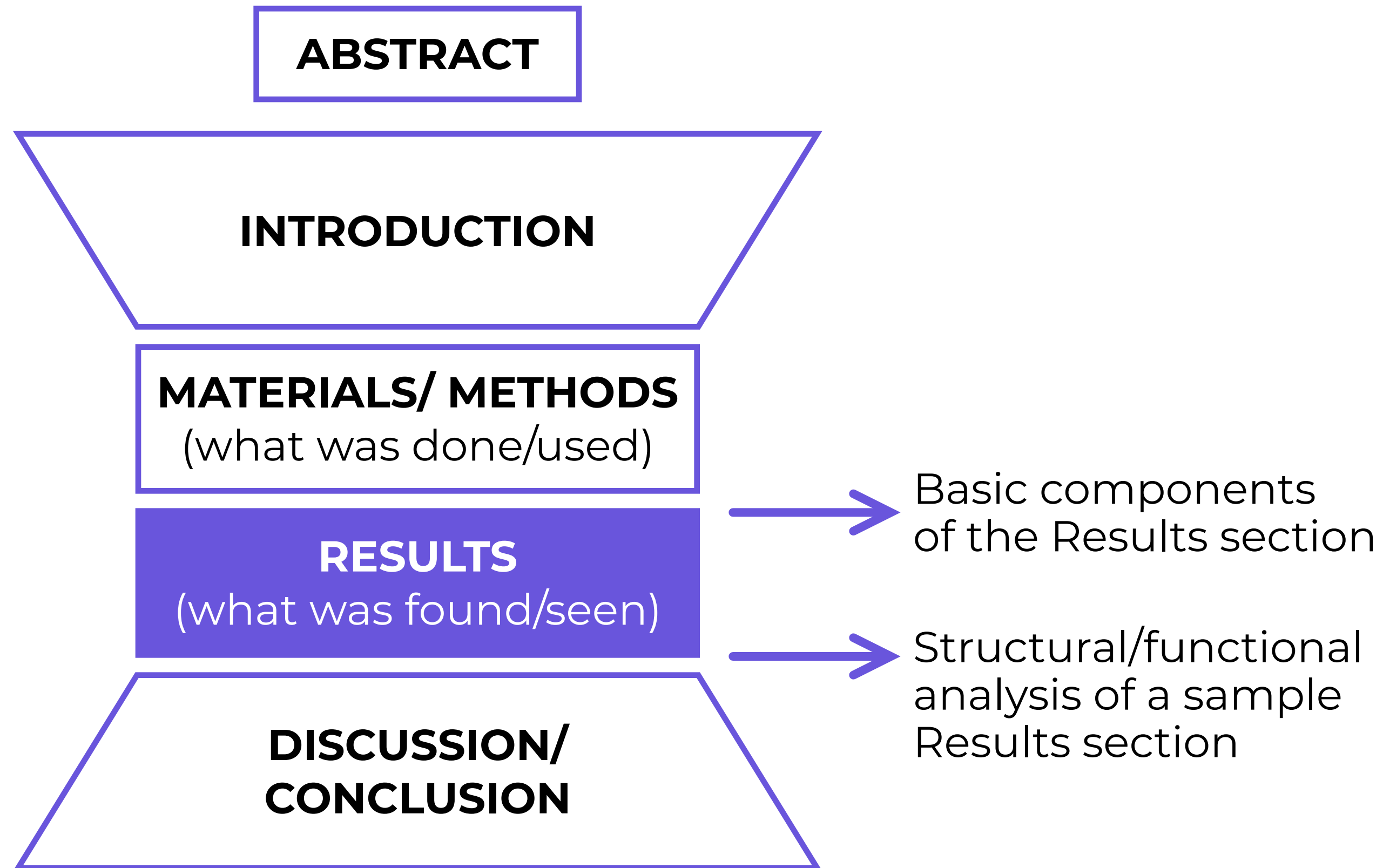




Section 4. Results as an IMRD component

Unit 1. Results: Structural analysis

Outline



Results

- Analysis
- Data analysis

Options for the subtitles

Option A	Option B	Option C	Option D
Results or Data analysis	Results or Data analysis	Results and Data analysis	Results or Data analysis
Discussion	Discussion	—	Discussion and Conclusion(s)
Conclusion(s)	—	Conclusion(s)	—

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How to present Results?

- Graphs
- Tables
- Equations
- Images

Writing Results section: Key points

- Highlight important, meaningful results not easily shown in tables/graphs
- Connect results to research objectives for context
- Provide background for result explanations or comparisons
- Address challenges, unsuccessful experiments, potential reasons
- Go beyond raw data: convey writer's interpretation
- Tables/graphs are effective for straightforward data presentation

What the writer is doing in a sentence?

Ask yourselves:

What is the tense of the main verb?

What is that tense normally used for?

Is it the same tense as in the previous sentence?

If not, why has the writer changed the tense?

What words has the writer chosen to use?

A sample Results section analysis

Comparing Tensile Strength between Alloy and Non-Alloy Materials: Modelled Results vs. On-Site Measurements

Results

1. Data obtained in previous studies^{1,2} using a fixed on-site monitor indicated that the use of alloy materials resulted in higher tensile strength compared to non-alloy materials. **2** According to Figo et al. (1999), the median tensile strength of alloys was 11% higher than that of non-alloys². **3** In our study, modelled tensile strength values were obtained using the Alloy Strength Model (ASM), an alloy properties modelling framework developed by Ka.³ **4** Modelled results were compared with actual tensile strength measurements taken at a fixed monitor.

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**Sentences 1, 2 —
the findings
and conclusions
obtained
by other
researchers**

Why does the writer start with an Introduction?

- Enhance reader-friendliness and clarity
- Help readers process information effectively
- Start with general statements
- Create connection to previous sections

A sample Results section analysis

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**Sentences 3, 4 —
writer's own
methodology,
additional
information**

Why refer to the Methodology?

- Emphasize key elements of materials/equipment/methods used
- Reinforce reader's understanding of the methodology
- More comprehensive than a basic overview in previous sections

A sample Results section analysis

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Results

1. Data obtained in previous studies^{1,2} using a fixed on-site monitor indicated that the use of alloy materials resulted in higher tensile strength compared to non-alloy materials. **2** According to Figo et al. (1999), the median tensile strength of alloys was 11% higher than that of non-alloys². **3** In our study, modelled tensile strength values were obtained using the Alloy Strength Model (ASM), an alloy properties modelling framework developed by Ka.³ **4** Modelled results were compared with actual tensile strength measurements taken at a fixed monitor.

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**Sentence 5 —
invitation to look
at the graph/
figure/table**

Inviting the reader to the graph: why and how?

- Give the reader time to analyze the data for themselves
- *One* possible interpretation – comment *after* viewing
- *Confusing* interpretation – comment *before* viewing to:
 - Averts potential misinterpretation
 - Ensures alignment of reader and writer's understanding

A sample Results section analysis

Comparing Tensile Strength between Alloy and Non-Alloy Materials: Modelled Results vs. On-Site Measurements

Results

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**Sentence 6 —
reference to
the specific
results, the use of
subjective
and evaluative
language**

Why compare Results with other studies

- Show fit in existing research
- Discussion preparation
- Effective research map development

Why use Evaluative Language?

Comments influence readers' findings

Example 1: As can be seen in Fig. 1, the two curves are very *similar*.

Example 2: As can be seen in Fig. 1, the two curves are noticeably *different*.

A sample Results section analysis

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**Sentence 7 —
a general
statement about
writer's results**

A sample Results section analysis

Comparing Tensile Strength between Alloy and Non-Alloy Materials: Modelled Results vs. On-Site Measurements

Results

1. Data obtained in previous studies^{1,2} using a fixed on-site monitor indicated that the use of alloy materials resulted in higher tensile strength compared to non-alloy materials. **2** According to Figo et al. (1999), the median tensile strength of alloys was 11% higher than that of non-alloys². **3** In our study, modelled tensile strength values were obtained using the Alloy Strength Model (ASM), an alloy properties modelling framework developed by Ka.³ **4** Modelled results were compared with actual tensile strength measurements taken at a fixed monitor. **5** Figure 1 shows the results obtained using ASM.

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Sentence 8 — refers to specific results, compare them with another study

A sample Results section analysis

Comparing Tensile Strength between Alloy and Non-Alloy Materials: Modelled Results vs. On-Site Measurements

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1. Data obtained in previous studies^{1,2} using a fixed on-site monitor indicated that the use of alloy materials resulted in higher tensile strength compared to non-alloy materials. **2** According to Figo et al. (1999), the median tensile strength of alloys was 11% higher than that of non-alloys². **3** In our study, modelled tensile strength values were obtained using the Alloy Strength Model (ASM), an alloy properties modelling framework developed by Ka.³ **4** Modelled results were compared with actual tensile strength measurements taken at a fixed monitor. **5** Figure 1 shows the results obtained using ASM.

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**Sentences 9, 10 —
commenting
specific results
in more detail**

Explanation vs Evaluation vs Implication

- Explanation: why result occurred
- Evaluation: meaning of result numbers
- Implication: what result suggests

A sample Results section analysis

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**Sentence 11 —
reference to the
method used to
analyze the results**

A sample Results section analysis

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**Sentence 12 —
the existence
of a problem
in the results**

Why mention the problem?

- Demonstration of complete control
- Precise assessment
- An essential element of Discussion/Conclusion

A sample Results section analysis

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**Sentence 13 —
the implications
and applications
of the work done**

Functions of the sample Results section

Sentences 1 and 2: findings and conclusions obtained by other researchers

Sentences 3 and 4: writer's own methodology, additional information

Sentence 5: invitation to look at a graph/figure/table

Sentence 6: reference to the specific results, the use of subjective and evaluative language

Sentence 7: a general statement about writer's results

Sentence 8: specific results to compares them with the results of another study

Sentences 9 and 10: commenting specific results in more detail

Sentence 11: reference to the method used to analyze the results

Sentence 12: the existence of a problem in the results

Sentence 13: the implications and applications of the work done

Basic components

I. Revisiting the research aim/existing research

- Revising/expanding methodology
- General overview of results

II. Invitation to view results

- Specific/key results in detail, with or without explanation
- Comparisons with results in other research
- Comparisons/s with model predictions

III. Problems with results

IV. Possible implications of results

Summary

- Results section comments on the results achieved
- Results section mentions the problems occurred
- Evaluative Language minimize the effect of the problems