Electronics and
Computer Science

UNIVERSITY OF
Southampton

Technical Writing:
Discussion

Nicolas Green
ng2@ecs.soton.ac.uk

What is a Discussion?

Key Points:

Written and/or finalised SECOND after the Results section.

This is almost as important as the Results section, it is where you ANALYSE your results, discuss what they mean and reach a conclusion about their significance.

THIS THE SECOND PART OF YOUR PROOF/JUSTIFICATION, where you relate background information and theories to your results and identify matches. In situations where you propose a hypothesis or model or design, you compare your results to requirements and calculate values of performance criteria.

What is done in this section is simple to state, harder to do.

Analyse

The purpose of this section is to analyse and also for you to demonstrate your ability to analyse.

Present your analysis of your data:

- Curve matching – use model empirical curves to demonstrate predictable patterns in data
- Statistical – use statistical methods (mean, standard deviation, etc) to group data and demonstrate aspect of distribution
- etc…

Interpret and discuss

Part of analysis is to interpret your data in relation to the background material.

Use your defined methods of analysis (from your methods section) to show this:

- Calculations of performance indicators
- Models from the background literature
- Theoretical understanding
- etc…

Discuss the outcome of your analysis in terms of the objectives of your work and the effect that varying system parameters had on the data, and what that means for your work.

Pull together data and analyses to build a model or picture as needed to justify whether or not objectives have been met.

Conclude

Make conclusions! This is the most important part of the analysis.

Has the analysis of your results demonstrated that the objectives have been achieved? Do they demonstrate that any requirements have been met?

Make QUANTITATIVE statements about these aspects.

Pay attention to how this is structured, ensuring that concluding statements come at the end of a paragraph of analysis or are given a paragraph of their own. These statements are your “roadsigns” to accessing the value of your work and you should draw attention to them. In longer pieces of work, with multiple Results/ Discussions, it might be better to include a short summary of conclusions at the end of every Discussion.

Repeat?

If this section is part of a design/test/evaluate cycle, then an additional requirement is that the conclusions and the value statements form an introduction to the next cycle presented in the document.

You therefore need to present (possibly with a design outcome summary) the necessary features which must be addressed as modified requirements for the next cycle.

Pay attention to the “flow” of the narrative to the following section which will be a “design/setup” for the next phase.

Summary

Write after or with Results.

This is where you justify your work and demonstrate your analytical ability AND your understanding of your work and the background.

Do NOT skimp on this section. The most common failing in technical writing is poor or confused presentation of analysis. Just as for the whole document, if the reader cannot understand it or access it, it might as well not have happened.