



THE UNIVERSITY
of EDINBURGH

HERIOT
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Robotics Research Review 3

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What makes a good report?

A well written report will demonstrate your ability to:

- Understand the purpose of the report brief and adhere to its specifications
- Gather, evaluate and analyse relevant information
- Structure material in a logical and coherent order
- Present your report in a consistent manner according to the instructions of the report brief
- Make appropriate conclusions that are supported by the evidence and analysis of the report
- Make thoughtful and practical recommendations where required

Good writing style

- Write in paragraphs which have one main point that you introduce, expand on, and summarise
- Avoid using colloquialisms and informality in academic writing
- Write words out in full, for instance use 'do not' instead of 'don't'
- Don't try to be funny, ironic, sarcastic, ... , but you can be lapidary
- Do use appropriate technical terms, but try to avoid jargon –
 - consider who is likely to read your report and whether they will understand the terms you use
 - it doesn't help to preface any uncommon term by a “so-called”

adapted from

<http://www.reading.ac.uk:8081/internal/studyadvice/StudyResources/Essays/sta-writingreport.aspx>

Format, style and argument:

“If it's worth doing, it's worth overdoing.” (Ayn Rand)

- consistency, Consistence, con-sistency
- Everything should be made as simple as possible, but no simpler
- Referentiality
- Figures!
- Lists of symbols, abbreviations, figures, etc.
- Preface, appendices, footnotes, dedication, acknowledgements, declaration, margin notes, 0th subsections, lists, ...

Why am I Telling this?

- Use Capitalisation consistently
- Use correct spacing ?[61]Always .
- Always more than one subsection per section
 - or subitems per item
- Use crossreferences, e.g. to figures, see Fig. 1 (use unbreakable spaces)
- Use correct “” Quotation marks'<<



Figure 1: Example of a figure caption for a Figure showing an Example of a Figure (stating the obvious?) produced using the Fontwork Gallery.

- Avoid “widows”

- and “orphans”

- bullet points

- bullet point

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Typography

- Use *very few fonts* per document
- Hyphens “-” should not be confused with dashes (en-dash “–“, em-dash “---”) or minus signs
- \sloppy to avoid text that extends beyond the margin
- Display style for formulas unless the

formula

(1)

is trivial

- Who was Kate Turabian?

Numbers and variables

- Aim at producing quantitative results
- Analyse dependency on parameters
- Don't use tables to present data (unless the table looks really nice)
- Use a reasonable numerical precision
- Use errorbars to indicate standard deviations
- Determine significance levels
- Discuss outliers explicitly
- Keep your notation simple, but follow standards
- Use fonts consistently (for variables etc.)

Research Article

**Consequences of erudite vernacular utilized irrespective of necessity:
problems with using long words needlessly**

Daniel M. Oppenheimer^{*}

Article first published online: 31 OCT 2005

DOI: 10.1002/acp.1178

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Issue



Applied Cognitive Psychology
Volume 20, Issue 2, pages
139–156, March 2006

Cited in: Richard Threlfall (2013) Mind your Language! A Very Brief Guide to Language Usage in Scientific Writing (1) Asian Journal of Organic Chemistry, Wiley-VCH Verlag.

Mind your Language!

"Functionalized polythiophene compound 1 exhibits attractive electronic properties and shows fluorescence due to functionalized polythiophene 1 possessing a benzyl group at the C5 position. This synthetic methodology represents both a significant advance over previous reports of functionalized polythiophene compounds and opens new avenues towards developing novel photoexcitable oligomers."

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Mind your Language!

"Functionalized polythiophene **compound 1** **exhibits** attractive electronic properties and **shows** fluorescence **due to functionalized polythiophene 1** possessing a benzyl group at the C5 position. This synthetic **methodology** **represents both** a **significant advance over previous reports** of **functionalized polythiophene compounds** and **opens new avenues towards developing novel** photoexcitable oligomers."

Mind your Language!

- compound – stating the obvious, can be omitted.
- exhibits – is this an art gallery or a chemical compound?
- shows (fluorescence) – to who?
- due to – only for concepts of time, where something is due to arrive, happen, and so on.
- functionalized polythiophene 1 – unnecessary repetition is common and unnecessary repetition takes away the focus from the subject through unnecessary repetition.
- possessing – avoid applying human traits to chemicals!
- methodology – is the study or description of methods, not the method itself.
- represents – only for things that are actually representative, for everything else, "is" works just as well.
- both – usually unnecessary and does not add anything to the meaning of the sentence.
- significant advance over previous reports – what advance? Be specific!
- functionalized polythiophene compounds – unnecessary repetition again!
- a opens new avenue towards – sounds grand, but non-specific metaphors generally do not add anything to the understanding of the concept.
- novel – redundant – of course things that haven't been developed yet are going to be novel! Another note on this word is that everything that is reported in a scientific journal should be novel, so it is not necessary to explicitly use it in your title/abstract/writing in general.

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Mind your Language!

"Functionalized polythiophene compound 1 exhibits attractive electronic properties and shows fluorescence due to functionalized polythiophene 1 possessing a benzyl group at the C5 position. This synthetic methodology represents both a significant advance over previous reports of functionalized polythiophene compounds and opens new avenues towards developing novel photoexcitable oligomers."

"Functionalized polythiophene 1 has useful electronic properties and fluoresces because it has a benzyl group at the C5 position. Our synthetic method has three fewer steps than those reported previously and can potentially be used for further development of photoexcitable oligomers."

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Mind your Language!

"Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius – and a lot of courage – to move in the opposite direction."

Ernst Friedrich Schumacher, 1911–1977, also wrote the book: "Small Is Beautiful: A study of economics as if people mattered" Blond & Briggs, 1973.

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<http://www.nature.com/scitable/> English Communication for Scientists

Use concise terms

Instead of:

possess

sufficient

utilise

demonstrate

assistance

terminate

Write:

have

enough

use

show

help

end

Use concise terms

Instead of:

prior to

due to the fact that

in a considerable number of cases

the vast majority of

during the time that

in close proximity to

it has long been known that

Write:

before

because

often

most

when

near

I'm too lazy to look up the reference

Dangling participles, succinctness is my goal.

- Sleeping in mine orchard, a serpent stung me. (Hamlet)
- Flitting gaily from flower to flower, the football player watched the bee.
- Analysing its capabilities, the robot outperformed alternative systems
- A dangling modifier walks into a bar. After finishing a drink, the bartender asks it to leave.
- A team led by Dr Craig Smith from the University of Hawaii at Manoa found the crabs using a remotely operated submersible.
- Hastily summoning an ambulance, the corpse was taken to the mortuary.

More information

- Seek feedback from peers
- Read the MSc project guide

<http://www.inf.ed.ac.uk/teaching/courses/diss/guide.html>

most of your questions are answered there

- If you have questions
 - ask your Mentor
 - make an appointment to see me