“Writing for Success”
Thursday 23 July via video conference

Notes and documents following the workshop

Chair: Dr Anne Drake (Manager, Research and Innovation)

Invited speaker for this workshop

Dr Jane Allardyce Technical and Academic Editor

Secretary: Teresa Treffry
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This is the fourth in in a series of workshops planned for 2015
The notes and slide presentations from all workshops for 2014 and 2015 are available via the following links

SEBE staff intranet - https://wiki.deakin.edu.au/display/SEBE/Research+Administration
SEBE Information for HDR students - http://www.deakin.edu.au/sebe/research/student-information
This is the fourth in a series of Faculty research workshops planned for 2015. Previous workshops have looked in depth at the issues to be considered when entering into an industry partnership and also the many opportunities to improve our C.V’s and track records by applying for prizes and awards.

Today’s workshop examines the skills needed for clear scientific writing and offers tips for success.

The guest speaker for this session is Technical and Academic Editor Dr Jayne Allardyce.

A Deakin Alumni, having once been a student here in the School of Life and Environmental Science, Jane has worked for a number of Government agencies and is now based at the Institute for Frontier Materials on the Waurn Ponds Campus. Offering workshops and seminars on writing skills, individual consultations as well as editorial assistance. Jane works with IFM for two days a week and SEBE for a further 2 days.

The presentation today includes details of how to request individual assistance, though you should be aware that there is a great demand for this service and you should allow two weeks for a reply and note that there is at present a two month waiting list. You are advised to attend the workshops first if possible.
Dr Jayne Allardyce notes that facts cannot speak for themselves and need a voice. What happens to your work if it never gets written up, if someone else publishes first or if the published findings are not clear and no one understands what you have written?

The cost of editing services is high and can take thousands of valuable research dollars. The goal of scientific writing is to communicate. Effective writing allows for a transfer of knowledge.

The presentation today covers

- Details of the workshops available in 2015, these begin with an introduction for new students and cover the basics of finding your own voice and the importance of a strong literature review. Other workshops cover the thesis writing process and other forms of presentation eg power point or poster presentations.

- Details of other assistance available i.e. individual consultations or editorial assistance. The links to the forms needed for this assistance may be found here [http://www.deakin.edu.au/sebe/research/student-information/resources](http://www.deakin.edu.au/sebe/research/student-information/resources)

- The fundamental elements of good scientific writing, giving examples of precise language and logical flow – always remember to keep good records /notes of your work and make sure these are dated

- Recommended reading.

- A list of Deakin training resources available to HDR students.

- Deakin online resources covering English language programmes, study skills and referencing

- A list of other useful online resources

The full PowerPoint presentation from Dr Jayne Allardyce with more information follows.
‘Scientific’ Writing

Jane Allardyce
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Technical and Academic Editor  
IFM & Faculty of SEBE

1. Writing training – workshops and seminars
2. Individual consultations (~6 sessions)
3. Editorial assistance
   - thesis chapters, confirmation of candidature document, publications

❖ Scientific writing handbook in development
Scientific Writing Workshops & Seminars 2015

- Introduction to Scientific Writing
- *Scientific Writing*: Essential Skills
- Writing the Confirmation of Candidature Document
- Writing a Scientific Literature Review
- The Thesis Writing Process
- Presenting Your Work – ppt/posters (with Dr Georgie Kelly)
- Writing Scientific Publications (with current academics)
Technical and Academic Editor

• Individual assistance
  1. Email me with your request
  2. Complete a training request form (signed by supervisor)
  3. I will arrange a time to meet with you & discuss your requirements
     – Initial meeting to discuss strategies
     – Subsequent meetings to work through piece of writing/address writing difficulties
     – Resources/recommendations
Technical and Academic Editor

- Editorial assistance
  1. Email me with your request
  2. Fill out the editing request form (signed by supervisor)
  3. You will be placed on the waiting list & emailed an expected date of return (usu. 14 days)
Scientific Writing

Why does it matter?
1. You make a major scientific breakthrough but never write it up – what happens to your work?

2. You make a major scientific breakthrough but take too long to write it up – someone else publishes it first

3. You publish your findings but nobody understands what you have written

4. You spend thousands of valuable research dollars each year on editing services for papers & grant applications.
Words are Powerful!

- Persuade
- Influence
- Teach
- Inspire
- Offend
- Mislead
- Deceive
Learning occurs through writing

“To write is to give material form to thought, to render it inseparable.”¹

“...the process of writing tends to clarify your ideas and you will find that you think more clearly about what you have done after the paper is written.”²


Learning occurs through writing

When you are writing ask yourself

• What do I want to (have to) say? (planning)

• What must I add/leave out? (drafting)

• Have I said what I needed to say? (editing)
The goal of scientific writing is to communicate
- inform (new findings/information)
- interest and/or persuade the reader

Effective writing allows for transfer of knowledge
Scientific writing

Fundamental elements of good scientific writing:

1. Clear
2. Precise
3. Logical (structure)
Elements of good scientific writing

Clear

– To communicate what was done & the significance of the work
  (What does it mean? Why is it important?)
– The facts can’t speak for themselves!
– Know who your readers will be (target audience) - write with them in mind

Clear writing is clear thinking – William Zinsser
The utilisation of a high-pressure, fully reinforced, elongated, rubber tubing apparatus, with a manually-operated trigger nozzle, was implemented by the aforementioned researcher in order to facilitate the removal of the particulate matter from the vehicle.
1. A high-pressure hose (Corvin200™) with a trigger nozzle was used to remove particulate matter from the vehicle.

2. A high-pressure hose (Corvin200™) with a trigger nozzle was used to clean the vehicle.

3. A high-pressure hose was used to clean the car.

*Depends on target audience
Use figures/tables to further illustrate abstract concepts

DNA is a double helix structure that is formed by base pairs attached to a sugar-phosphate backbone.
Elements of good scientific writing

Precise

• Replace vague or subjective language with quantifiable terms
  – Tall  >2m
  – Many  more than 80% of people
  – Most  >90% of all samples
Precise language – an example

✗ “A number of soap powders tested caused some skin irritation after a few hours contact.”

✓ “Seven of the ten soap powders tested caused mild to moderate skin irritation after 12 hours contact.”

You would need to define (numerical scale/images) the irritation level.
Logical Flow

– Well ordered ideas/argument (tells a story)
– Sentence structure (you can read & understand it the first time!)
– Smooth transitions between sentences & paragraphs (signaling & linking language)

**Includes sufficient citations and acknowledgements

http://www.deakin.edu.au/students/study-support/referencing/plagiarism
What is “bad” scientific writing?

- Unclear - poor sentence structure that obscures the message
- Vague/imprecise language
- Too much jargon
- Not enough, or too much, information
- Does not convey the significance of the results
- Full of typos, poorly formatted
Writing is a process

1. **Read** - publications, review articles, (stay up to date), theses

   - This reading forms the basis for your literature review, your introduction to your thesis and papers

2. **Plan** - write down your aims (what do you need to say?)

   - Draft an outline of the main points
Writing is a **process**

3. **Write** – *often*, get your ideas down on paper/screen

   I. Start with headings & sub-headings

   II. Begin to jot down ideas – e.g. reference to key papers/results

   III. Then perhaps a sentence or series of bullet points that briefly describe what the section will contain

   IV. Build upon this over time
4. **Rewrite** – until you have written a **draft**
   - don’t be afraid to write a bad first draft!

5. **Revise** – read your own work back (out loud) & **rewrite it**
   - be prepared to cut and pare back to essentials

6. **Seek feedback** – supervisors, colleagues, Jane (**early** – not 6 weeks out from submission!!)
Recommended Reading
Deakin’s HDR training resources

- Deakin Research
- Division of Student Life
- Library – EndNote, referencing
- Language & Learning Advisers (library)

- [www.deakin.edu.au/students/studying/study-support/ask-us](http://www.deakin.edu.au/students/studying/study-support/ask-us)
Deakin’s online resources

- Word Power: English language skills (lead by qualified English language teachers)
  - Sentence structure, punctuation, tenses, articles, academic vocabulary
  - [www.deakin.edu.au/current-students/study-support/study-skills/english/english-language-programs](http://www.deakin.edu.au/current-students/study-support/study-skills/english/english-language-programs)
Deakin’s online resources


  • Study Skills Success
    – Academic study skills & language skills

  • Tense Buster
    – Exercises to improve your understanding of grammar - from elementary to advanced

• Deakin Guide to Referencing
  – [http://www.deakin.edu.au/students/study-support/referencing](http://www.deakin.edu.au/students/study-support/referencing)
Other online resources

• The Purdue OWL – Online Writing Lab
  owl.english.purdue.edu/owl

• RMIT Study and Learning Centre
  www.rmit.edu.au/studyandlearningcentre

• Academic Word List
  http://www.victoria.ac.nz/lals/resources/academicwordlist/sublists