ACADEMIC WRITING WORKSHOP

Science/Applied Science Stream

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Graduate Education Officer
64887010
http://www.postgraduate.uwa.edu.au
Part 1: THESIS WRITING
- To determine what issues you would like covered
- To discuss the purpose of a thesis
- To determine the elements of a good thesis
- To discuss how different theses are organised
- To provide strategies to equip you to write a good thesis

Part 2: ACADEMIC WRITING STYLE
- To consider strategies for writing a thesis that has a logical structure and communicates effectively
- To consider sentence and paragraph structure

Part 3: ACADEMIC WRITING BEHAVIOURS & PROCESSES
- To explore writing as a process
- To practice using strategies to facilitate your continued writing
What aspect of your thesis writing do you want to improve?

What do you want to gain from this workshop?

What is a thesis?

The word "thesis" comes from the Greek word for "position". It forms the central organising principle for your writing.


"A thesis makes an original contribution to knowledge through research, puts forward a clear and consistent argument, and convinces the reader of its validity through logic, analysis and evidence.”

A thesis is:

- Proposition to be discussed / proved / defended
- Story in which each chapter is an integral part
- Platform for communicating your contribution to scholarship
- Evidence that you should be awarded your degree
- Basis for building your track record for future employment
- [Platform for communicating your passion for a subject]

Examination Process

Details regarding the “The Process of Thesis Examination” can be found on the GRS website UWA Home Graduate Research School Current Students The research journey Managing your project Teaching your self online http://www.postgraduate.uwa.edu.au/students/journey/managing http://www.postgraduate.uwa.edu.au/students/journey/?a=1572786

~ 3 weeks before thesis submission
Nomination of examiners to Graduate Research and Scholarships Office
The University requires: external examiners PhD=3, Masters = 2
Board of Graduate Research School appoints examiners

Thesis submitted
(4 temporarily bound copies for PhD.; 3 copies for Masters)
Thesis sent to examiners
Examiners reports received by Graduate Research and Scholarships Office
(minimum ~3 months from submission)
Reports considered by Board of Graduate Research School
(minimum ~2 weeks)
Thesis classified

<table>
<thead>
<tr>
<th>a) Passed with no corrections or amendments; thesis bound</th>
<th>Degree awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Passed subject to minor revision, to the satisfaction of the Board; corrections completed; certified by supervisor and Board; thesis bound</td>
<td>Degree awarded</td>
</tr>
<tr>
<td>c) Passed subject to substantive amendments. Candidate must submit a detailed report to the Board outlining the amendments to the thesis for final classification; Thesis corrected and certified by supervisor, corrected thesis and detailed report certified by Board; thesis bound</td>
<td>Degree awarded</td>
</tr>
<tr>
<td>d) Thesis to be resubmitted for examination after completing the required extra work and revision (a resubmitted thesis can only be passed or failed, no further resubmission permitted). If passed, thesis bound</td>
<td>Degree awarded</td>
</tr>
<tr>
<td>e) A failed Ph.D. thesis MAY be classed as fulfilling the requirements of a Masters degree; thesis bound.</td>
<td>Masters Degree awarded</td>
</tr>
<tr>
<td>f) Failed.</td>
<td>No degree awarded</td>
</tr>
<tr>
<td>g) A Masters thesis submitted for examination but which the examiners deem fulfills the criteria for a Ph.D. may be classified as a Ph.D.; thesis bound.</td>
<td>Ph.D. Degree awarded</td>
</tr>
</tbody>
</table>

NB. The Board does not send theses for examination without a declaration from the Supervisor and Head of School that their form and content have met the standard required for examination, therefore we expect very few failures.
“The (Masters) degree must be a substantial work generally based on independent research which shows a sound knowledge of the subject of the research, evidence of the exercise of some independence of thought and the ability of expression in clear and concise language”

**RECOMMENDATION FOR CLASSIFICATION**

- Please mark one box only and refer Page 2 for the required Merit Criteria Scores -

<table>
<thead>
<tr>
<th>PASS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ The thesis be <strong>PASSED</strong> with no requirement for correction or amendments and the student be awarded the degree of Master</td>
<td></td>
</tr>
<tr>
<td>☐ The thesis be <strong>PASSED, SUBJECT TO MINOR REVISION</strong> as indicated in my report to the satisfaction of the Board.</td>
<td></td>
</tr>
<tr>
<td>☐ The thesis be <strong>PASSED, SUBJECT TO SUBSTANTIVE AMENDMENTS</strong> along the lines indicated in my report. The student be instructed to submit a detailed report to the Board of the Graduate Research School outlining the amendments to the thesis for final classification, without further reference to the examiners.</td>
<td></td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>RE-SUBMIT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ The thesis be <strong>RE-SUBMITTED</strong> for examination after completing the required extra work and revision indicated in my report. (A thesis which must be re-submitted requires alterations of such scale, complexity and/or conceptual significance that their adequacy should be appraised again by an external expert/s).</td>
<td></td>
</tr>
</tbody>
</table>

*Please indicate if you would be prepared to re-examine this thesis:*

| ☐ I am prepared to re-examine this thesis. | ☐ I am NOT prepared to re-examine this thesis. |  |

OR

<table>
<thead>
<tr>
<th>AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ That the quality of the thesis is of an exceptional standard, I recommend the award of the degree of Doctor of Philosophy. (The (PhD) thesis shall be a substantial and original contribution to scholarship, for example through the discovery of new knowledge, the formulation of theories or the innovative re-interpretation of known data and established ideas ).</td>
<td></td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>FAIL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ The thesis be <strong>FAILED</strong> and the student NOT be awarded the degree of Master and NOT be permitted to resubmit the thesis in a revised form.</td>
<td></td>
</tr>
</tbody>
</table>
Graduate Research School
Examiners' Recommendation Form
Degree of Master of

STUDENT: 

EXAMINER: 

Please complete the following Merit Criteria Score for this thesis with respect to the six criteria for award of a Master from The University of Western Australia.

Please indicate your scores next to each criteria. (Refer Merit Criteria Scores Key)

<table>
<thead>
<tr>
<th>Score</th>
<th>Merit Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exceptional</td>
<td>Of the highest merit, at the forefront of international Masters in the field. Fewer than 5% of students worldwide would fall in this band.</td>
</tr>
<tr>
<td>2</td>
<td>Excellent</td>
<td>Strongly competitive at international levels. Fewer than 20% of students would fall in this band.</td>
</tr>
<tr>
<td>3</td>
<td>Very good</td>
<td>An interesting, sound and compelling thesis. Approximately 30% of students would fall in this band.</td>
</tr>
<tr>
<td>4</td>
<td>Good</td>
<td>A sound thesis, but lacks a compelling element in some respect. Approximately 30% of students would fall in this band.</td>
</tr>
<tr>
<td>5</td>
<td>Fair</td>
<td>The thesis has potential, but requires major revisions. Approximately 20% of students would score in this band.</td>
</tr>
<tr>
<td>6</td>
<td>Flawed</td>
<td>The thesis does not meet the required standard for this criterion</td>
</tr>
</tbody>
</table>

Merit Criteria Scores Key

Please attach your report (minimum length – 1 page).

☐ I confirm that there is no actual or perceived conflict of interest arising from my examination of this thesis.

Signature: ______________________ Date: ______________________
Graduate Research School
Examiners’ Recommendation Form
Degree of Doctor of Philosophy

“The (PhD) thesis shall be a substantial and original contribution to scholarship, for example through the discovery of new knowledge, the formulation of theories or the innovative re-interpretation of known data and established ideas”

<table>
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<tr>
<th>STUDENT:</th>
<th>EXAMINER:</th>
</tr>
</thead>
</table>

## RECOMMENDATION FOR CLASSIFICATION
- Please mark one box only and refer Page 2 for the required Merit Criteria Scores –

### PASS
- [ ] The thesis be **PASSED** with no requirement for correction or amendments and the student be awarded the degree of Doctor of Philosophy.
- [ ] The thesis be **PASSED, SUBJECT TO MINOR REVISION** as indicated in my report to the satisfaction of the Board.
- [ ] The thesis be **PASSED, SUBJECT TO SUBSTANTIVE AMENDMENTS** along the lines indicated in my report. The student be instructed to submit a detailed report to the Board of the Graduate Research School outlining the amendments to the thesis for final classification, without further reference to the examiners.

### OR

### RE-SUBMIT
- [ ] The thesis be **RE-SUBMITTED** for examination after completing the required extra work and revision indicated in my report. (A thesis which must be re-submitted requires alterations of such scale, complexity and/or conceptual significance that their adequacy should be appraised again by an external expert/s).

- Please indicate if you would be prepared to re-examine this thesis -
  - [ ] I am prepared to re-examine this thesis.
  - [ ] I am NOT prepared to re-examine this thesis.

### OR

### AWARD OF THE DEGREE OF MASTER
- [ ] The thesis NOT be awarded the degree of Doctor of Philosophy but be **PASSED** for the appropriate degree of MASTER. (The (Masters) degree must be a substantial work generally based on independent research which shows a sound knowledge of the subject of the research, evidence of the exercise of some independence of thought and ability of expression in clear and concise language).

### OR

### FAIL
- [ ] The thesis be **FAILED** and the student NOT be awarded the degree of Doctor of Philosophy OR the degree of master and NOT be permitted to resubmit the thesis in a revised form.
Graduate Research School
Examiners' Recommendation Form
Degree of Doctor of Philosophy

Please complete the following Merit Criteria Score for this thesis with respect to the six criteria for award of a Doctor of Philosophy from The University of Western Australia.

Please indicate your scores next to each criteria. *(Refer Merit Criteria Scores Key)*

<table>
<thead>
<tr>
<th>SCORE</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The thesis as a whole is a substantial and original contribution to knowledge of the subject with which it deals.</td>
</tr>
<tr>
<td></td>
<td>The student shows familiarity with, and understanding of, the relevant literature.</td>
</tr>
<tr>
<td></td>
<td>The thesis provides a sufficiently comprehensive study of the topic.</td>
</tr>
<tr>
<td></td>
<td>The techniques adopted are appropriate to the subject matter and are properly applied.</td>
</tr>
<tr>
<td></td>
<td>The results are suitably set out, and accompanied by adequate exposition.</td>
</tr>
<tr>
<td></td>
<td>The quality of English and general presentation are of a standard for publication.</td>
</tr>
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</table>

**Merit Criteria Scores Key**

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<td>The thesis does not meet the required standard for this criterion</td>
</tr>
</tbody>
</table>

*Please attach your report (minimum length – 1 page).*

☐ I confirm that there is no actual or perceived conflict of interest arising from my examination of this thesis.

Signature: ____________________________ Date: ________________________
What are the features of a good thesis?
Typical examiners comments for theses they rate highly:

Mullins & Kiley. 2002. It’s a PhD, not a Nobel Prize’: how experienced examiners assess research theses. Studies in Higher Education Volume 27, No. 4, 2002. Available at:
www.studentservices.uwa.edu.au/__data/page/65297/Its_a_PhD_not_a_Nobel_Prize.pdf

- The candidate sets out to describe the focus of her research in the very first sentence of the Introduction. This kind of clarity is typical of the entire thesis.
- The thesis is well written and has been put together with some care; it has a logical structure, is well illustrated and it is easy for the reader to navigate their way through it.
- The clear presentation of hypothesis and aim at the start of each chapter is an attractive feature.
- The candidate is acquainted with influential research in her field.
- It is nice to find a graduate student who has actually read the original and oft-cited papers and picked up that their original proposal was...
- I am grateful for the opportunity to examine this interesting thesis and very much enjoyed reading it: I learnt a lot.
- In general this thesis has been well thought out...It is beautifully written – clear, concise and readable. The figures and tables are logically laid out, complement the text and are clearly captioned and the photos are really quite good. I know I will refer to this work often in the future as I continue my work ...
What are the features of a poor thesis?
Typical examiners comments for theses they rate as marginal


- So for me, this thesis has a number of problems. None are fatal but they are exceedingly annoying. The thesis is marred by poor organisation, spelling, grammar, expression and referencing.
- You have put enormous effort into this thesis...You write beautifully...But you need to convey your ideas much more succinctly and with a more critical eye...you need to tell the reader more of the how and why of doing what you did.
- the presentation of the concepts had little theoretical underpinnings
- I would like to see the objectives and outcomes of each of the experimental sections a bit more focussed with 1-2 hypotheses clearly stated at the beginning and clearly dealt with at the end.
- Many of the key references are cited, but it seemed as though much of the primary literature had not been read carefully by the candidate.
- Although the two most critical areas of the thesis are in conflict, I feel the student does not confidently deal with this issue.
### Criteria that distinguish high quality & marginal quality theses

Centre for Study of Research Training & Impact, University of Newcastle.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>High quality theses</th>
<th>Marginal quality theses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis scope/topic</td>
<td>Significance and challenge of the topic was evident</td>
<td>Aim of the study was not clear, or differed throughout the thesis</td>
</tr>
<tr>
<td>Significance and contribution of the thesis</td>
<td>Scholarly contribution, a significant advance to knowledge in the field</td>
<td>Nothing new has been added to the topic: ‘lack of originality’</td>
</tr>
<tr>
<td></td>
<td>For professional disciplines, adding substantively to debates about practical issues</td>
<td></td>
</tr>
<tr>
<td>Thesis approach</td>
<td>An original approach that has realised a significant contribution to the field</td>
<td>Questionable integrity of the approach of thesis</td>
</tr>
<tr>
<td></td>
<td>Methodologically sound/proficient/expert and comprehensive</td>
<td>Over-interpretation of the data</td>
</tr>
<tr>
<td>Subject matter and findings</td>
<td>Clear connections are made throughout the thesis</td>
<td>Lack of synthesis and integration</td>
</tr>
<tr>
<td></td>
<td>Reporting that was careful, accurate, honest or even challenging or courageous</td>
<td>Lack of critical analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broad generalisations that were not supported (although they could have been)</td>
</tr>
<tr>
<td>Literature review: Use and application</td>
<td>Expert use of the literature in design of the study and discussion of the findings</td>
<td>Inadequate coverage or focus of the literature in relation to the study</td>
</tr>
<tr>
<td></td>
<td>Thorough, clear and incisive reporting of the literature, comprehensive and definitive</td>
<td>Inaccuracies and omissions in referencing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussion that was ‘devoid of reference to the literature’</td>
</tr>
<tr>
<td>Existing publications</td>
<td>Particularly in science/technology disciplines, the assurance of quality has been established by blind review</td>
<td></td>
</tr>
<tr>
<td>Publications arising</td>
<td>Recognised the need for early publication of/from the study</td>
<td></td>
</tr>
<tr>
<td>Communicative competence: substantive</td>
<td>Cogent and straightforward writing. Eloquence was a bonus. Logical sequencing of presentation and argument</td>
<td>Lacking polish and therefore difficult to read and comprehend</td>
</tr>
<tr>
<td>Communicative competence: editorial</td>
<td></td>
<td>Manifest editorial inadequacies</td>
</tr>
</tbody>
</table>
Reviewing theses

A few pages from theses that were rated as very good to exceptional are provided as examples. Pass these around, and look at Tables of Contents, skim read the Abstract etc. This should give you an overview of what a good thesis looks like.

Take note of what you like, features you were not expecting and areas that you do particularly like.

Give some thought to what may characterise a good thesis in your discipline.

The three most important features of a good thesis in my discipline are:
Graduate Research School

Style and format

You are required to format and style your thesis in a certain manner.

The following components need to appear in your thesis:

1. Title page
2. Abstract/summary
3. Table of contents
4. Acknowledgements
5. Statement of candidate contribution
6. Main text
7. Bibliography or references
8. Appendices

Title page

You should include:

- title of your thesis in full
- your names and degrees
- statement of presentation in the form: "This thesis is presented for the degree of Doctor of Philosophy/Master of [insert name of degree] of The University of Western Australia"
- school
- discipline (where applicable)
- year of submission.

If you are enrolled in a degree which has examinable components other than a thesis, you should state: "This thesis is presented in partial fulfilment of the requirements for the [insert name of degree]."

Abstract/summary

The abstract or summary should summarise the appropriate headings, aims, scope and conclusion of the thesis in about 300 words, but no more than 700 words.
Table of contents

Acknowledgements

Statement of candidate contribution

If your thesis includes work by others, such as published work with multiple authors, you must include a clear statement of the relative contributions of the student and other parties.

In the case of published work with multiple authors, each author must give permission for you to include it in the thesis, and you and your coordinating supervisor must sign a statement that permission has been obtained.

The statement is included in your Thesis Submission form.

Main text

6.1. Word limits

PhD theses may not exceed 100,000 words, excluding appendices, tables and illustrative matter.

Master's theses may not exceed 50,000 words, excluding appendices, tables and illustrative matter.

A thesis that exceeds the word limit must be supported with reasons in writing by the Head of School. If these limits are not exceeded, the length of the thesis is at your discretion, taking into account the advice of your supervisor and Head of School. In some disciplines, PhD theses are shorter than 25,000 words.

6.2. Volumes

Theses are not restricted to one volume. Each volume should be no more than 6cm in spine width and 2.5kg in weight.

6.3. Layout: type and paper

Theses should be double or one-and-a-half space typed on international A4 sized paper (weight at least 70gsm for original copy) with a left hand margin of 4cm.

There should be a 2cm margin on all other edges.

Typing on both sides is encouraged, and margins should be mirrored accordingly, refer to Rules 1.3.1.31 to 1.3.1.35 in the University General Rules for Academic Courses - Researcher higher degrees (by thesis).
6.4. Tips

Check that there are no incorrect references, misspellings or typographical errors and that all pages are present and in sequence before your thesis is submitted.

A thesis may also be presented in the form of a typescript, as a published book or paper, or as a series of papers.

Bibliography or references

A consistent method of citing references should be used. Most disciplines have recommended standard referencing styles. Your school or supervisor can supply you with information on the style you should use.

If you are jointly enrolled, you should discuss this with supervisors from both disciplines and come to some arrangement which is acceptable to both disciplines.

The library has an excellent guide to citations, which lists the various standard types of citations including how to cite internet references.

You should also ensure all references cited in the text are listed in the bibliography. Your contribution to the thesis must be fully explained, refer to Rules 1.3.1.31 to 1.3.1.35 in the University General Rules for Academic Courses - Researcher higher degrees (by thesis).

Appendices

Copies of your publications may be attached to the thesis as appendices.

Accompanying material must be securely mounted, with margins as above.

There are no restrictions on the size of accompanying maps, drawings, musical scores or computer printouts but additional permanent binding charges may apply.
Thesis writing styles

You should ask your supervisor’s advice on appropriate Citation Style (eg APA, Harvard)
Obtain the guide on that style from the Library at http://www.library.uwa.edu.au/education_training_and_support/guides

Style Guides

- *Style manual for authors, editors and printers* 2002, 6th ed revised by Snooks & Co, John Wiley and sons, Australia Ltd. Canberra (available in UWA Science and Reid Libraries)

Determine the style and conventions for your discipline area

Review examples of academic writing for styles that you like

Develop your own style guide - establish & document the rules you will follow in your thesis.
Thesis Overview

Title:
A very condensed summary of your work
• must contain key words (at start if possible)
• experiment with a number of working titles before settling on one that accurately and concisely describes your thesis - constructing a good working title, and displaying it in a prominent place, will help you keep your writing focussed.

Abstract:
A summary of your entire thesis that MUST make a claim to new results
• Why you did the work
• How you did the work
• What your main findings/ results were
• What your principal conclusions were

General Introduction:
Makes an argument for the value of your research in 3 key moves
1. Establish a research territory
   • show that the research area is important, central, interesting, problematic or relevant in some way
2. Establish a niche for your research
   • indicate gaps in previous research
   • raise questions about previous research
   • show how previous knowledge needs to be extended
3. Occupy that niche
   • outline where your study will extend current knowledge or research or how it differs from current research
   • pose an overall question/ frame a broad hypothesis that requires a number of steps (investigations, chapters, studies, etc.) to address
   • outline the steps you will take to address the broad question (the “thesis” of the thesis)
   • indicate the structure of the thesis
Literature Review:
Synthesises the relevant research literature to demonstrate that you are a competent researcher and that your thesis is valuable.

- May be part of Introduction
- Must have breadth and include “landmark” studies
- Must highlight gaps in the knowledge
- Must highlight areas of controversy
- Must formulate questions that need further research
- May highlight deficiencies in current methods
- Should be concise, formal and unambiguous
- It IS a critical analysis

Show...that you have integrated the material you read and that you have evaluated the quality of information.
After finishing the literature review (readers) should understand the research questions, procedures, and findings that characterise the field. They should also know the weaknesses of past studies and what has to be done to move the field forward.
If you have organised the review skilfully you will have led the reader to the conclusion that the absolutely best next study to be done in the area is the one you are proposing.

Chapters:
- Deal with the “steps” required to deal with the overall problem
- Consider the relevance of each Chapter to the development of your thesis argument
  - necessary background for the chapter to be understood
  - interpretation in relation to current state of knowledge or technology
  - new insights
Conclusion or General Discussion:
- Ties the findings together in relation to the overall question
- Does not introduce new material
- Provides a critical assessment of the research
- Should suggest further studies/questions and alternative ways of looking at the research area

Preparing to write a good thesis

Find good examples to model using the National Library of Australia’s Trove service:

Use your thesis as your central organising principle.
The thesis statement usually appears in the first chapter where the background to the study is described. It will often determine the framework for the literature review and the data collection and it is revisited in the last chapter. It permeates the whole study.

Know which parts of your thesis are the most important in convincing the examiners that you have met the requirements for your degree. Concentrate your efforts on making sure these parts are clearly written and that they provide evidence that shows that you deserve your degree.

Develop good writing habits (this will be covered in more detail in the workshop “Academic Writing in Practice”)
- Write regularly and write often
- Draft, revise, edit, proofread
- Obtain feedback
- Obtain support
- Start your own writing group, join our writing group
My next step in writing a better thesis is to .....
Part 2: ACADEMIC WRITING

Reflecting on academic writing skills

How do you think academic writing (scientific writing / technical writing) for your thesis differs from writing you have done previously?

What thesis writing skills do you have?

What do you find difficult when you are writing? What skills do you need to develop?
Features of ‘good’ academic writing

Aim for a thesis that is intellectually rigorous, easy to read (accessible), & interesting.

In this order of importance:

- Precise & complete – conscious choice of words that conveys exact and complete meaning. Don’t leave your reader thinking ‘What?’ or ‘So what?’
- Clear – simple language with exception of required technical terms
- Brief – as short as possible, avoiding unnecessary words or sentences (repetition & redundancy)

And also:

- Effective structure – good use of sentences & paragraphs and well organised sections, chapters & thesis (internal consistency & well-linked)
- Correct spelling and grammar – more important to clearly express and logically order ideas, as once message is clearly communicated someone else can help you correct spelling and grammar
- Simple, clear illustrations – indicative of ‘higher order’ thinking / more sophisticated understanding
- Follows disciplinary conventions – before deviating from convention make sure you know what the convention is
- Interesting

[Adapted from Dr Juniper’s powerpoint presentation ‘Writing your Thesis’. See http://www.postgraduate.uwa.edu.au/students/journey/writing]

Consider the micro and macro structure of your thesis. Review how these elements link together & their internal consistency.

Sentences
Paragraphs
Sections
Chapters/Papers
Thesis

Simple writing exercises

Example: A sentence with too much information. Edit by the inclusion of full stops into manageable sentences. (Hint: Read this aloud).

The level of demand on the commitment and ability of communities to undertake coordinated and targeted action in Natural Resource Management has increased over the last two decades and there has been recognition of the need to develop community capacity to meet these new challenges yet there is little evidence of consideration of the notions of communities that can be derived from a rich, if fluctuating, history of community research.

Example: Sentences that are unnecessarily ‘wordy’. Remove any unnecessary text.

From analysing the data presented in Table 2 the results show that sample A is higher in sodium levels than sample B.

Example: Sentences that are incomplete – include information that addresses ‘So what?’ and clearly indicates what is the point of reference is.

Although many of these instruments are commonly applied to the assessment of learning in young children, they have a number of potential limitations. Childhood learning is important because….

Example: Sentences with multiple interpretations (meanings). What would be a more precise way to write these sentences?

Sample X was chilled.
Patient 3 had an incurable disease.
Example: Sentence with complex structure. What would be a simpler way to write this sentence?

The Cardiovascular Disease Programme has been given a high priority for implementation by the World Health Organisation, in particular the social, leisure, and health components of this programme, and this will assist primary health professionals to obtain grants for research directed at improving the quality of life of individuals who have developed coronary disease.

Example: Sentences made complex by noun cluster. What would be a simpler way to write these sentences?

The board approved a Foothills Boulevard Landfill gas emission reduction credits transfer contract authorization by law.

Recently, several researchers have expressed concern about the use of high-efficiency multiple voltage retinal prosthesis research platforms for the analysis of vision in rabbits.

Example: Sentences that are difficult to compare. What would be a simpler structure that highlights the comparison?

At 12rpm, when assessing the rotation of the large platform, there is little movement of the arms. The arms of the smaller platform move erratically when it is rotating at 36rpm.
Writing well

Do not aim to impress....

“ If the writing is clear and simple, fellow scientists will not only find your writing pleasanter to read, but they will also think you are a better scientist, have a better organised mind, and are more competent. Readers seem less and less prepared to accept the traditional smokescreen. If they can understand easily, they are more likely to be impressed with the quality of the thought behind the words”. (Turk & Kirkman, 1989, p. 18)

...aim to communicate.

“It does not matter how pleased an author might be to have converted all the right data into sentences and paragraphs; it matters only whether a large majority of the reading audience accurately perceives what the author had in mind.” (Gopen and Swan, 1990, p. 550)

Writing can be structured to support readers to predict what will come next - well written work is structured so that readers are guided in what will follow, and their expectations are actually fulfilled.

“If the reader is to grasp what the writer means, the writer must understand what the reader needs.” (Gopen and Swan, 1990, p. 550)

What does the reader need?

• Readers actively seek a basis for prediction
• Readers form expectations based both on topic and organisation
• Reader predictions are based on words that are read (from the top)
• Topic predictions may be fulfilled by word repetition, predictable word groups, disciplinary conventions
• Items that fulfil reader predictions need to be in a noticeable position; at the front of the text unit
• Readers expect to continue predicting until the final section
• Readers become confused when predictions are not fulfilled
• Unpredicted/unpredictable topics increase reader difficulty

[Adapted from Lawe-Davies, 2001]

Academic writing is very different to fiction – there should be not twists or turns of the plot and no surprise endings. In academic writing the complexity lies in the concepts not the structure of the text.
Writing sentences - important structural principles

Make your sentences accessible and clear, without minimizing the complexity of ideas conveyed.

Positioning words
- a sentence should focus on a single item
- place the object of focus at the beginning of the sentence – in the ‘topic position’
- follow the object of focus as closely as possible with its verb
- place new information you want to emphasize to the reader at the end of the sentence – in the ‘stress position’
- choose a verb to articulate action in every clause or sentence
- avoid ‘noun clusters’ or ‘stacked modifiers’

Linking sentences
- in general, provide context for your reader before asking that reader to consider anything new
- place information presented in previous sentences in the topic position to provide link between old and new sentences and set the context for the new sentence - linkage backward and contextualization forward
- use transition words to guide the reader – these words allow the reader to follow your connection of items/ideas
- try to ensure that the sentence coincides with the relative expectations for emphasis indicated by the structure

General guidelines
- make sure your sentence is complete - don’t leave the reader with a sense of ‘So what?’ Either follow with an explanation or expand sentence to explain significance of sentence.

Additional handouts:
Deakin University: Academic Writing Style http://deakin.edu.au/current-students/study-support/study-skills/handouts/style.php
Academic Phrasebank: Writing Introductions http://www.phrasebank.manchester.ac.uk/introductions.htm
University of Ottawa: Transition Words http://www.sass.uottawa.ca/writing/kit/grammar-transitional.pdf
Some difficult sentences and modifications that make them more comprehensible

[Adapted from Gopen & Swan, 1999]

Example:
The smallest of the URF’s (URFA6L), a 207-nucleotide (nt) reading frame overlapping out of phase the NH$_2$-terminal portion of the adenosinetriphosphatase (ATPase) subunit 6 gene has been identified as the animal equivalent of the recently discovered yeast H$^+$-ATPase subunit 8 gene.

Example:
Recently, however, immunoprecipitation experiments with antibodies to purified, bovine heart rotenone-sensitive NADH-ubiquinone oxido-reductase (also known as Complex I), as well as enzyme fractionation studies have indicated that six human URF’s (that is, URF1, URF2, URF3, URF4, URF4, and URF5) encode subunits of Complex I which is a large complex that also contains many subunits synthesized in the cytoplasm.
Example – Effective Transitions & Signposts

Consider the first 3 paragraphs of Matthew Simpson’s high quality PhD Thesis *An Analysis of Unconfined Ground Water Flow Characteristics near a Seepage-Face Boundary*

**Paragraph 1**

Ground water flow occurs under conditions that are usually classified as being either confined or unconfined. Confined ground water flow is... Conversely, unconfined flow...

- The structure is clearly signposted by the use of “either - or” and “conversely”, and repetition, in correct order, of the terms “confined” and “unconfined”

**Paragraph 2**

The ...quantification of unconfined flow processes... The justification for ignoring the vertical processes is that the horizontal length scale of a typical unconfined aquifer is much larger than the vertical, i.e. \( L \gg H \) in Fig 1-1. Therefore...

- Repetition of key words provides a link between paragraphs
- An argument is signposted, and the reader is referred to a Figure that makes the point visually. The consequence of the argument is also explained.

**Paragraph 3:**

Several analysts have expressed reservation about horizontal flow modelling strategies; for example...Although these reservations have been voiced, other researchers have shown that...Therefore...

- A point is made and an illustration signposted. The words “although” and “other” indicate that controversy is being discussed. The word “therefore” signposts an outcome of the controversy or a conclusion.
Writing paragraphs - important structural principles

Good, focussed writing is underpinned by a clear paragraph structure. Paragraphs 'break up' the information you want to present to your reader, structuring it in such a way that guides the reader through a series of related ideas.

Academic paragraphs follow what is known as a ‘general-to-specific’ sequence whereby they begin with a general (or topic) sentence and become increasingly focused on information which contributes to your argument.

A clear topic sentence is essential to a good paragraph. Topic sentences tell the reader what your paragraph is about, and help prepare them for what you will then say.

Steps to writing good academic paragraphs

- Select a topic for your paragraph and a key question that your paragraph will answer. For example the topic may be “features of good academic paragraphs” and a key question might be “what are the features?”
- Decide on the answer to your question. You may need to do some mind mapping or even free writing to sort out your thoughts first.
- Use your own words to write a sentence that is a simple and direct answer to the key question. For example “Good academic paragraphs contain a clear topic sentence, cohesive support, convincing argumentation, and good expression.”
- Write a cohesive set of supporting sentences. They should be well ordered and contain appropriate transition signals.
- Make your answer as convincing as possible through effective argumentation - use evidence (research data, statistics, expert opinion) and logic. Explain, exemplify and justify your answer.
- Check your paragraph for good expression, grammar, spelling, punctuation, capitalisation and referencing.
Various Eulerian link-node models have been developed for the simulation of transport for water quality modelling. For example, Tim et al (2003), Jin et al (1998), Lung and Larson (1995), Gu and Dong (1998) used WASP5 for water quality modelling in rivers and lakes. Barnell et al (2004) and Melching et al (1994) used QUAL2E for river water quality modelling. However, the Eulerian models contain an undesirably large amount of numerical diffusion in the advection simulation (refs) and are found unsatisfactory for transport and water quality modelling. Also, due to the limitations in time steps, Eulerian models may not be suitable for long term simulations of large river systems. In the Lagrangian frame, as the control volumes are moved with the mean flow velocity, numerical diffusion associated with advection is totally eliminated and accurate modelling of transport and water quality may be achieved. Further, a Lagrangian model allows a large time step so that a long term simulation may be achieved.

Can you list the points the author is making?

What is he arguing?

How might you restructure this to make his arguments clearer to the reader?

Example:
Read through O’Beirne’s Abstract for the UWA PhD in Physiology “Mathematical modelling and electrophysiological monitoring of the regulation of cochlear amplification.
Consider how he has structured his paragraphs & used signposting to guide the reader through the text.
Exercise:
Write three well structured introductory paragraphs on the topic “What is good academic writing?” Once you have finished, share what you have written with others at your Table, and give constructive feedback to develop a piece of well written text.
Final words.....

Useful as general rule of thumb but not a guiding principle:

- Paragraphs on average are ~ 100 words long (50 – 250 words)
- Sentences on average are ~ 25 words long
- Sentences/ paragraphs that are too long may indicate a lack of focus - rambling
- Sentences/ paragraphs that are too short may indicate underdeveloped ideas - bitty

Grammar
See StudySmarter

Spelling
Don’t rely on your spellchecker


More about spelling checkers

Eye have a spelling chequer.
It came with my pea sea.
It plainly marques four my revue.
Miss steaks eye kin knot sea.

I have a spell checker, it came with my PC, it plainly marks for my review, mistakes I cannot see.
Part 3: Writing as a Process

In the course of producing a piece of writing, you will need to consider and deal with a number of things. These will include:

- Language and its structures - spelling, grammar, sentence & paragraph structures
- Discipline specific conventions for academic writing
  - Model good (highly cited?) paper(s) in prestigious journals in area
  - Know the formatting requirements for UWA thesis - general.
  - Review theses in your area - good models to follow (adt.caul.edu.au)
- Cognitive aspects
  - What counts as knowledge in this discipline, what kinds of evidence are required for academic argument in this discipline?
  - What is the message to be communicated and how clearly does the writer understand it? Good academic writing is underpinned by clarity of thought about the message to be communicated and the arguments to be made.
  - How will you go about developing the coherent argument or unifying theme that a thesis must have?
- Writing strategies
  - Free-writing
  - Generative writing – using prompts or scaffolds to direct free-writing
  - Mind mapping
  - Brainstorming
  - Other creative approaches?
  - Time management (controlling distractions including email and internet)
  - Setting priorities
  - Do you have a ‘snack’ or ‘binge’ approach to writing? Some evidence that writing regularly, in short stretches is more productive than less frequent, sustained writing
- Approaches to refining text – seeing writing as a series of stages from drafting, to revising, editing, then proofreading
  - How to obtain effective feedback and how to use that effectively?
  - Reading aloud as a way of refining text.
    “Read it aloud with conviction, then play with it until it feels good in the mouth and sounds good to the ear”. Keynote address, Peter Elbow, WDHE conference, Strathclyde University, Glasgow, 2008.
Peter Elbow’s developmental model of writing

- do lots of fast writing/free-writing
- allow yourself to get it wrong and then develop what is right
- write so much that you’re no longer afraid of ruthless editing

[Writing With Power : Techniques for Mastering the Writing Process. [UWA electronic resource]

- Social aspects of writing
  - discussing your writing with others
  - getting feedback from others, including peers
  - joining writer’s groups
- Emotional processes associated with writing
  - feelings of isolation
  - “imposter syndrome”
  - dealing with the critical reactions to your writing
    See “Prose Persistence and Psychopaths” - Prof. David Pannell’s personal reflections on the challenges of getting your work published
- Writing and identity – a study of academics at the Institute of Education London found that all who remained highly productive writers throughout their careers included the identity of “writer” in their view of themselves.

“Your own mindset, along with those of your family and colleagues, contribute to your success. Have a personal belief in yourself or your project.”

Seven Strategies for Successful Writing

[Adapted from Murray, R. 2001. Integrating teaching and research through writing development for students and staff Learning and Teaching in Higher Education Vol 2 (1) p. 31-45. Download at http://alh.sagepub.com/cgi/content/short/2/1/31]

1. Discuss your journey through the writing process with others
2. Get feedback on writing from others
3. Free write
4. Use generative writing
5. Set goals for writing
6. Use a framework for writing
7. Discuss writing with someone who has experience in teaching writing

How ‘Real’ Writing is Actually Done
[Adapted from Talk for Postgrads by A/Prof Cliff Ollier on 8/11/04]

The elements of a successful piece of professional writing: short, readable, completed on time

The writing process:
Work → Finish → Write → Rewrite → Work

- A thesis is assessed on what is written down - Many science students spend up to 90% of their time on doing, and only 10% on writing, BUT the worth of the work will be judged by what is written about it. SO suggest you divide the time so that 50% is spent on doing, and 50% is spent on writing.
- Students procrastinate about writing because of fear - This fear is the result of poor teaching practice in relation to writing. You have been taught that there is something to fear about the way you use grammar, about your writing style and about the correctness of your writing.
- The secret of overcoming this fear is to realise that writing is all about rewriting - You don’t need to get it right the first (or second or third) time. Focus first on producing READABLE writing, then deal with grammar and style. Keep your writing simple and the style will look after itself.
Some basic rules of writing

- Have something to say.
- If you have two things to say, control yourself. Say one first and then the other. Do not say both at the same time.
- If you can’t say it, you don’t know it.
- Know your audience and write with them in mind.

How to write

- Write substantial chunks of material at a time.
- Write without stopping to look up references, to go and check on data etc. Finish the whole of the first draft before attending to detail. If there are bits of information missing, make it up and add it in as you rewrite.
- Write anywhere, anytime and in any uncomfortable position. Don’t wait for ideal conditions in which to write – doing this is nothing more than procrastination.
- Start writing using the simplest language you can and use the active voice. Write as though you were speaking to someone. You can make your writing sound more formal if you need to, in the process of rewriting.

When to write:

As early as possible.

You can write up a draft of the work before you have actually done it. This is likely to give your work clearer structure and focus, and make the writing easier. It is easier to write something you don’t take so seriously and then edit (and re-edit) the serious document than to write something that is really important to you.
Stages in Writing your Thesis - Drafting

“In the first draft of your thesis you are really finding out what you know. In a sense, you are writing for yourself, so the first draft is experimental.”

“Because the writer’s problem in getting started is a psychological one, we suggest psychological solutions”

Some ideas to help you draft:

Free writing and generative writing

Some useful prompts for generative writing in a thesis

My thesis argues that....
The contribution my thesis makes is...
I think my contribution to knowledge is...
What I really want to say is...
My thesis is about...
The questions I would like to answer in my thesis are...
The themes my thesis covers are...
My thesis deals with the following questions....
A logical way to organise my thesis may be...
This issue is important because...
When I read the literature I wonder about...
When I look at my results I wonder about...
What this means is that...
The overarching question that my research addresses is...
The stage I am at now is ...
The next step is ...
What I am interested in finding out is ...
For my doctorate ‘original’ means ...
Since last week/month I have progressed by ...
I have identified a problem with ...
Brown’s Eight Questions for Drafting a Research Article

[Brown, R. 1994. Write Right First Time Literati Newsline Special Issue: 1-8]

Note: You can answer these questions in any order.

1. What is the working title for your paper or chapter?
2. Who are the authors?
3. What is the anticipated journal or publisher?
4. Who are the intended readers? Name 4-6 potential readers, give their names and why they would be interested in this article.
5. a. What is the central question your paper will pose? ~30 words.
   b. What is the answer it will provide? ~30 words
6. If your readers had only one sentence to summarise your article, what should it be? Focus on the outcomes from the work rather than the inputs. ~25 words.
7. a. Why did you do the work? Briefly outline the problem and why it is important. ~70 words.
   b. What did you do? Briefly outline the methods you used to gather evidence. ~70 words.
   c. What happened? Briefly outline the key results. Focus on outcomes. ~100 words.

What can you add to theory? Think about how your results and conclusions will change how people see the world. ~70 words.

What can you add to practice? Think about how your results and conclusions might change what people do. ~70 words.

8. What remains unresolved? This is mainly for your own benefit to help you think about where your research sits in the body of knowledge, but some of it may also be useful in your discussion. No word limit.
The Ten Thesis Questions for Drafting a Thesis Chapter
[Knowles, S. and Grant, B. 2007. UWA Postgraduate Writing Retreat Booklet]

1. What is the thesis chapter’s working title? ~20 words.
2. Who is the target audience/s (in addition to supervisors and examiners)? Think of 2-4 potential readers, give their names and why they would be interested in reading this chapter.
3. How does this chapter relate to the preceding and subsequent chapters? Write one sentence about each connection.
4. How do you define the overall purpose of this chapter? Briefly outline the work you intent to do (Is it a self-contained chapter for publication which follows the Introduction, Methods, Results, Discussion pattern? Is it a data chapter? Is it a theoretical or conceptual piece? Is it a review of the literature?)
5. a. What is the central question you will pose in this chapter? If you are finding it difficult to start, then try some freewriting - start with “What I’d like to say is....” or “This draft will be about...” ~30 words.
b. What is the answer or what insights will your chapter provide? ~ 100 words.
6. How would you summarise your chapter in one sentence to your readers? Focus on the outcomes from the work - what you have added to knowledge and understanding and not on the inputs. ~25 words.
7. a. What introductory material does the reader need to gain background on your topic?
b. Will literature need to be reviewed to set the scene for the research problem in order to indicate inconclusiveness of previous research? Briefly outline how you will structure the review (studies that are closely related to distantly related; by approach; chronological etc). What are the boundaries of relevance?
c. What theoretical contribution have you made that need to be flagged? Briefly outline how you will organise the theoretical framework for your research.
d. What are the methodological approaches that the reader needs to grasp? Briefly outline the distinctive methodological approaches and the methods you used to gather evidence.
e. If you are writing a case-study or theme chapter, what are the significant findings about this particular case-study or theme that need to be highlighted?
f. If you are writing a conclusion chapter, what unresolved issues will you discuss? This will help you reflect on where your research sits in the body of knowledge, and may prove useful in your discussion.
8. What other possible titles are you considering? Focussing on the title encourages you to think about what you will give to the reader; what is it about the work that is inviting?
9. What are the sub-sections you will use? Can you write any provisional sub-headings for them?
10. If you are revising a thesis chapter, what, in a nutshell, are the most important changes for you to address? Make a list and write yourself a brief message about each of these changes.
Stages in Writing your Thesis - Revising

“Skilled writers revise constantly, trying to resolve the tensions between what they want to say, and what the sentences actually record. For many skilled writers revising is the crux of the writing process. It is the way they shape prose into meaning for an audience, and the way they discover what they want to say, sometimes to their own surprise.”

[Yang, quoted in Elphinstone and Schweizer, 1998, p. 83].

As you revise your drafts, look for weaknesses in:

- Argument
  Are the points you are making clear?
  Do you have a sound grasp of theory?
  Do you need to illustrate/support your position? Are you missing supporting references? Have you used your data convincingly?
  Have you answered possible objections to your assertions?

- Structure
  Look at how your thoughts are organised by just looking at your headings and subheadings.
  Do your headings comprise a hierarchy of ideas that moves from more general ideas to more specific ones?
  Do your headings accurately predict the content that follows?
  Are your headings informative enough?
  If you put together your introductory and concluding paragraphs do they make a ‘complete’ story?

When revising your drafts, try to read them as a specialist in the field (e.g. an examiner) would.

Start by reading them aloud.
Stages in Writing your Thesis - Editing

“Editing is about getting your text in good shape for your reader” (Elphinstone and Schweizer, 1998 p. 85).

Edit to strengthen your paragraphs by:

- Highlighting the key importance of paragraphs with a topic sentence that accurately conveys the point of the paragraph
- Provide clear signposting using transition words and discourse markers
- Provide context for your reader before asking that reader to consider anything new

Edit to strengthen your sentences by:

- Use short, well-planned sentences that convey your exact meaning
- Try to match the text with the readers expectations

Editors symbols to help with the process of editing & proofreading

(?) lack of clarity
(c) check the accuracy of this point
(x) material that could be deleted
(r) repetitive
(e) evidence required, or (ref) reference required
(i) interpretive weakness

See [http://www.ccc.commnet.edu/writing/symbols.htm](http://www.ccc.commnet.edu/writing/symbols.htm) for common proofreading symbols and abbreviations
Stages in Writing your Thesis - Proofreading

Checking accuracy and consistency in use of language, in style and layout

- Are all sentences ‘good’ sentences?
  Do all sentences have a subject in the subject position and a verb that the subject refers to? Are the subject and verb close together?
  Does the topic position in each sentence contain information that has already been introduced, so that it links backwards?
  Does the topic position provide contextualisation forwards?
  Is new information that needs to be emphasized placed in the stress position?
- Are there vague or imprecise terms that could be replaced by more precise words or phrases?
- Is there ambiguity in use of pronouns (such as “it”, “they”, “these”)
- Are concepts explained or have you used noun clusters (also known as stacked modifiers) as labels for a concept? For example, replace “the phytoplankton space-time distribution” with “the distribution of phytoplankton in space and time”.
- Have there words that could be removed without any loss of meaning? Is each word there for a reason?
- Are tenses used correctly?
  Past tense – aims / objectives (what they were), equipment / methods (what you did)
  Present tense – discussion / conclusions (what your results are showing, what you are concluding), truth / general principles
- Can you make more use of the active voice?
- Is punctuation used correctly? Do you need more or fewer commas? Do you need to shorten your sentences? Would your ideas writing flow better if ideas were combined into longer sentences?
- Is there need for more transition words and signposts for the reader? Or are transition words overdone?
Using feedback to improve your writing:

In this part of the workshop you may work in pairs to give feedback on actual writing you have done. You will then use this feedback to improve the structure of your writing. For the purpose of this workshop we suggest you limit your discussion to 2 or 3 paragraphs and a total piece of writing that is no longer than a single A4 page.

If you have not brought along a piece of your writing - draft an abstract for your thesis or paper

- Your abstract should elaborate on the title and condense your thesis or paper
- If you are completing a PhD it MUST lay a claim to new knowledge
- It needs to tell the reader why you did the work, how you did the work, what your main results or findings were, and what your principal conclusions are.

What to do:

1. Exchange your writing with a partner and read each other’s draft. Begin by reading the entire piece to obtain an overview. Briefly describe what you think the main points are and what is being argued.

2. Now look at the work paragraph by paragraph. What point is being made in each paragraph? Can you identify a sentence that makes this point? Is this sentence located early in the paragraph? Do you have any suggestions about how the paragraph structure may be improved?

3. Provide feedback on the draft to your partner. Pay particular attention to parts you are confused about or misunderstand. Discuss how the paragraphs may be restructured so that the key messages are more clearly understood.

4. Rewrite your work so that the paragraphs have a topic sentence located in the first sentence (unless there’s a good reason not to).

5. Now that you have a piece of writing that is well structured, you can move on to the revising, editing and proofreading phases. Start by reading each paragraph aloud.
References

- Flesch, R.F. 1962. *The Art of Readable Writing* (available from the Humanities and Social Science Library, 808.042 Art)
- Harvey, G. 1998 *Writing with Sources: a guide for students* Hackett Publishing Company
- How to recognise plagiarism [http://www.indiana.edu/~istd/sitemap.html](http://www.indiana.edu/~istd/sitemap.html)
- Murphy, E. 1985. *You Can Write* Longman
References

- Spelling, grammar, sentence & paragraph structures:
  Strunk, W. The Elements of Style (See http://www.bartleby.com/141/index.html).
  Also available in the Reid Library Reserve Collection, 808.042 2000 ELE
  Truss, L. 2003. Eats shoots and leaves: the zero tolerance approach to punctuation
  by Lynne Truss (available at the MPSL library, 428.2 2003 EAT)
  Flesch, R. F. 1962. The Art of Readable Writing (available from the Humanities and
  Social Science Library, 808.042 Art)
  Gowers, E. (1973) The Complete Plain Words (available from the Humanities and
  Social Science Library, 808 1973)
  Secrets of Tertiary Success, South Melbourne, Victoria: Thompson. This book
  includes useful tips on improving grammar, punctuation and spelling. [Available
  from Student Services, Second floor, Social Sciences South].

- Discipline specific conventions for academic writing:
  A Report Writing Style Guide for Engineering Students
  Sciences and Medical Libraries (808.0665 1995 GUI) and also at Student
  Services].
  Library, 808.0666 1996 CRA

- Cognitive aspects
  University of Queensland’s PhD- First Thoughts to Finished Writing:

- Writing Strategies
  Elbow, Peter. 1998. Writing With Power : Techniques for Mastering the Writing
  Flesch, R.F. (1962) The Art of Readable Writing (available from the Humanities and
  Social Science Library 808.042 Art)
  Gowers, E. (1973) The Complete Plain Words (available from the Humanities and
  Social Science Library 808 1973)

- Emotional processes in Writing
  Prof. David Pannell’s personal reflections on the challenges of getting your work

- Writing and identity
  Carnell et al. http://www.writenow.ac.uk/wdhe/programme_abstracts.html#54
Academic writing style

- Use formal language
- Be tentative
- Be precise and specific
- Use impersonal language
- Use powerful reporting verbs
- Further reading

Use formal language

The language of university writing is quite different from the language you would use when having a casual chat with friends.

You are expected to use a more formal type of language when writing academic papers. This may mean changing habits you have developed and allowing plenty of time to edit and revise your writing style after you have finished writing the content.

Avoid colloquialisms

For example, instead of using the words pretty good, a shocker or heaps of data you might write a paper was poorly researched or unsubstantiated; persuasive or insightful; was well researched or provided significant and detailed data.

Instead of using the words pros and cons, write advantages and disadvantages or positives and negatives.

Avoid contractions

For example, the words does not, should have, it is should be used rather than doesn’t, should’ve, it’s.

Avoid abbreviations

It is preferable to avoid using e.g., i.e. and etc., particularly in the body of your text. Instead, use for example, that is, and and the like.

Remember that and the like or and so forth are not necessary in a list that starts with the words for example or such as.

Be tentative

Very little in the world is clearly either right or wrong, all or nothing. Beliefs we may have held at one time may be challenged and later disproved. Most research cannot cover every case of an event or phenomenon so most theories are open to modification. Academics, therefore, are cautious in the way they present their findings and so should you be in your writing. Use words or phrases such as:

- suggests that
- there is a tendency for
- it would seem that
- probable
- the majority of

Here is an example of the use of tentative language:

Recent research suggests that a majority of people prefer email to traditional letter writing as a mode of communication (Mahlab 1994).

Be precise and specific
It is important to be clear about what you are saying. Good academic writing presents complex ideas as simply and clearly as possible. Clear writing indicates clear thinking.

- Develop a list of "power" words - ones that say a lot very succinctly, e.g."a controversial idea" is a much more precise way of saying "an idea that not everyone agrees with"; "nocturnal" is a more precise word for "active at night".
- Buy a good dictionary - not a pocket one; buy a subject-specific dictionary, e.g. a dictionary of economics.
- Avoid using long abstract words when short ones would more clearly express your point.
- Vary sentence structure and length - be wary of long complex sentences.

**Use impersonal language**

In some subject areas you are expected to avoid the pronoun "I". At the same time, however, you are often asked to make judgements and include your own views on an issue. How can you do this without saying "I think...I feel..." etc?

In fact, whatever is included in your paper that is not attributed to someone else, (e.g. "Jones (1987) demonstrates that...", "According to Smith (1994)...") is assumed to be yours. So instead of saying "I think that all guns should be banned" you can say "There is a case for stricter government control on guns". The fact that you are not reporting another person's view implies that it is your own.

**Use powerful reporting verbs**

When you discuss other people's research you can create extra meaning by using a more precise reporting verb.

For example, "Jacob (1998) concedes that the test is not 100% reliable" is more powerful than "Jacob says that the test is not 100% reliable" since concedes carries the extra meaning of giving up something from a position.

Other useful reporting verbs are:

- contend
- examine
- state
- disagree
- persuade
- dismiss
- refute
- object
- contradict
- recommend
- concur
- propose
- describe
- observe
- assert
- support
- purport
- examine
- suggest
- claim

The more you read academic material, the faster you will pick up the appropriate academic style in your discipline.

**Further reading**

- Editing
- Academic writing style FAQ

6th June 2011
Academic writing

What to avoid in formal writing

When writing an essay, it is important to construct a reasoned argument that is supported by carefully researched evidence. The language that you use needs to be precise and uncluttered by unnecessary devices which have the potential to distract the reader, shift the meaning or detract from the clarity of the argument.

Clichés

A cliché is an expression that has been overused.

Examples:

- We cannot build a new school at this point in time.
- Who would have thought that slavery could exist in this day and age?
- The Prime Minister believed that at the end of the day her policies would be vindicated.

Metaphor

A metaphor takes a name or descriptive term and applies it to a person or object in a non-literal sense - for example, 'a glaring error', 'the heart of the matter', 'pillar of the community', 'wave of terrorism', and so on.

Similes

A simile compares a person, action or object with something else - for example, 'fly like an eagle', 'solid as a rock', 'as happy as Larry', 'pleased as Punch', and so on.

Well-chosen metaphors and similes can give your writing immense expressive power. Once a metaphor or simile has become a cliché, it no longer provides a vivid image for the reader. Consequently, instead of impressing your readers with your writing style, you leave them with the impression that you have nothing of substance to say.

Figures of speech

Figures of speech are closely related to clichés. Like metaphors and similes, figures of speech provide a writer with a colourful or forceful means to draw attention to a particular point but should be avoided in...
Colloquialisms and slang

Colloquialisms are words or phrases that belong in conversational contexts:

- Everybody was wandering around like stunned mullets. (Dazed and confused)
- We'll all be pushing up daisies soon enough. (Dead)

In everyday speech or conversation we often contract words so that what we say does not sound too pompous. E.g. 'can not' (e.g. can't), 'have not' (e.g. haven't), 'is not' (isn't), 'would have' (would've), 'should have' (e.g. should've) and so on. However, in academic writing, colloquial forms should be avoided.

Some colloquialisms, such as slang expressions or phrases might demean or exclude other language users and must also be avoided. See inclusive language.

Padding

Padding consists of all the extra words added to writing that do not add anything to the meaning or content of the text. This includes:

- Redundant phrases such as 'It is interesting/worthy/important to note that ...' 'For what its worth ...'.
- Irrelevant material which has no bearing on your topic.
- 'Dead' words includes words which repeat other words e.g. dead corpse, combined together.
- Adverbs add quantity but little to the meaning. Adverbs such as: really, rather, quite, totally and so on, may not enhance your expression. For example: really obscure, rather tedious.

Pomposity and pretentiousness

Sometimes writers think that by using big, unfamiliar words or complicated sentence structures that this makes their writing sound sophisticated or more important. But it usually just means that no one understands it. For example:

This author concludes that, after due and full consideration, some writers exhibit discursive practices that produce undecipherable sentences, the intelligibility of which beggar even the most sophisticated ratiocinative beings.

The sentence could be rewritten in a number of ways:
Very simply

Some people write so badly that no one understands it.

More complex

Some people write in a way that makes it difficult for even quite educated people to understand them.

Texting language

Texting language is the collective term used for the shorthand way that people talk to each other using text messages, email, instant messaging and other forms of written contact. Abbreviating words is common in text language as the examples below show.

- asap - As soon as possible
- atm - At the moment
- b4 - Before
- brb - Be right back
- btw - By the way

These example and others are used in informal texting exchanges. It is important to remember that text language is not acceptable in formal writing such as essays, exams, reports etcetera.
Writing Introductions

There are many ways to introduce an academic essay or assignment. Most academic writers, however, appear to do one or more of the following in their introductions:

- establish the context, background and/or importance of the topic
- indicate a problem, controversy or a gap in the field of study
- define the topic or key terms
- state of the purpose of the essay/writing
- provide an overview of the coverage and/or structure of the writing

Examples of phrases which are commonly employed to realise these functions are listed below. Note that there may be a certain amount of overlap between some of the categories under which the phrases are listed.

Introductory sections for research dissertations, are normally much more complex than this and, as well as the elements above, may include the following: a synopsis of key literature/current state of knowledge, synopsis of methods, lists of research questions or hypotheses to be tested, significance of the study, recognition of the limitations of the study, reasons for personal interest in the topic.

Establishing the importance of the topic:

One of the most significant current discussions in legal and moral philosophy is ......
It is becoming increasingly difficult to ignore the ......
X is the leading cause of death in western industrialised countries.
X is a common disorder characterised by ......
X is an important component in the climate system, and plays a key role in Y.
In the new global economy, X has become a central issue for ......
In the history of development economics, X has been thought of as a key factor in ......
Xs are one of the most widely used groups of antibacterial agents and ......
Xs are the most potent anti-inflammatory agents known.
X is a major public health problem, and the cause of about 4% of the global burden of disease.
X is an increasingly important area in applied linguistics.
Central to the entire discipline of X is the concept of ......
X is at the heart of our understanding of ......

Establishing the importance of the topic (time frame given):

Recent developments in X have heightened the need for ......
In recent years, there has been an increasing interest in ......
Recent developments in the field of X have led to a renewed interest in ......
Recently, researchers have shown an increased interest in ......
The past decade has seen the rapid development of X in many ......
The past thirty years have seen increasingly rapid advances in the field of ......
Over the past century there has been a dramatic increase in ......
One of the most important events of the 1970s was ......
Traditionally, Xs have subscribed to the belief that ......
X proved an important literary genre in the early Y community.
The changes experienced by Xs over the past decade remain unprecedented.
Xs are one of the most widely used groups of antibacterial agents and have been extensively used for decades to ......

**Highlighting a problem in the field of study:**

However, these rapid changes are having a serious effect ......
However, a major problem with this kind of application is ......
Lack of X has existed as a health problem for many years.
Despite its safety and efficacy, X suffers from several major drawbacks:
However, research has consistently shown that first year students have not attained an adequate understanding of ......
There is increasing concern that some Xs are being disadvantaged ......
Despite its long clinical success, X has a number of problems in use.
Questions have been raised about the safety of prolonged use of ......

**Highlighting a controversy in the field of study:**

To date there has been little agreement on what ......
More recently, literature has emerged that offers contradictory findings about ..... 
One observer has already drawn attention to the paradox in ..... 
In many Xs a debate is taking place between Ys and Zs concerning ..... 
The controversy about scientific evidence for X has raged unabated for over a century. 
Debate continues about the best strategies for the management of ..... 
This concept has recently been challenged by ........ studies demonstrating ........ 
One of the most significant current discussions in legal and moral philosophy is ..... 
One observer has already drawn attention to the paradox in ..... 
In many Xs a debate is taking place between Ys and Zs concerning ..... 
The controversy about scientific evidence for X has raged unabated for over a century. 
Questions have been raised about the safety of prolonged use of ..... 
The issue of X has been a controversial and much disputed subject within the field of ..... 
The issue has grown in importance in light of recent ..... 
One major theoretical issue that has dominated the field for many years concerns ..... 
One major issue in early X research concerned........

**Highlighting a knowledge gap in the field of study (for research):**

So far, however, there has been little discussion about ..... 
However, far too little attention has been paid to ..... 
Most studies in X have only been carried out in a small number of areas. 
The research to date has tended to focus on X rather than Y. 
In addition, no research has been found that surveyed ..... 
So far this method has only been applied to ..... 
Several studies have produced estimates of X (Smith, 2002; Jones, 2003), but there is still insufficient data for ..... 
However, there have been no controlled studies which compare differences in ..... 
The experimental data are rather controversial, and there is no general agreement about ..... 
However, there is no reliable evidence that ..... 
X's analysis does not take account of ..... nor does he examine ..... 

**Focus, aim, argument:**
This paper will focus on/examine/give an account of ......
This essay seeks to remedy these problems by analysing the literature of ......
The objectives of this research are to determine whether ......
This paper seeks to address the following questions:
This essay critically examines/discusses/traces ......
The purpose of this paper is to review recent research into the ......
This paper will review the research conducted on ......
This chapter reviews the literature concerning the usefulness of using ......
The aim of this paper is to determine/examine ......
The aim of this study was to evaluate and validate ......

In this paper I argue that .....  
In the pages that follow, it will be argued that ......  
This paper attempts to show that ......
In this essay, I attempt to defend the view that ......

Outline of structure:

The main questions/issues addressed in this paper are: a), b and c).  
This paper has been divided into four parts. The first part deals with ......
The essay has been organised in the following way.
This paper first gives a brief overview of the recent history of X.
This paper begins by ...... It will then go on to ......
The first section of this paper will examine ......
Finally, ......

Chapter 2 begins by laying out the theoretical dimensions of the research, and looks at how ......
Chapter 3 describes the design, synthesis, characterization and evaluation of ......
The last chapter assesses the ......

Explaining Keywords

While a variety of definitions of the term X have been suggested, this paper will use the definition first suggested by Smith (1968) who saw it as ......
Throughout this paper the term X will refer to/will be used to refer to ......
In this article the acronym/abbreviation XYZ will be used.
Paramedic Method: A Lesson in Writing Concisely

Use the Paramedic Method (originally developed by Richard Lanham in *Revising Prose*) to edit any kind of professional writing. Editing your professional writing using the Paramedic Method will make your prose easier to read. Sentences that are easy to read are more persuasive and more user-centered.

Professional writers understand the need for clear, concise prose. An industry standard for helping workplace writers achieve user-centered, persuasive, and clear prose is the Paramedic Method. When you use the Paramedic Method, you will reduce your word count by eliminating unnecessary words. The Paramedic Method also helps you activate your sentences by eliminating passive voice and redundancies. The Paramedic Method is an easy to learn, systematic way to make your sentences more persuasive and more user-centered.

Follow the seven steps below to improve the readability of your sentences.

**The Paramedic Method**

1. Circle the prepositions (of, in, about, for, onto, into)
2. Draw a box around the "is" verb forms
3. Ask, "Where's the action?"
4. Change the "action" into a simple verb
5. Move the doer into the subject (Who's kicking whom)
6. Eliminate any unnecessary slow wind-ups
7. Eliminate any redundancies.

Image Caption: Paramedic Method Example
When you write an experimental report, or draft a thesis chapter, you need to choose which tense, or tenses, to use.

This flyer provides advice intended to help you become more conscious of what the choice of verb tense involves, and to become better able to notice the tense choices that writers in your particular field have made.

From your chosen tense, your reader receives two kinds of information. One concerns time: it is about ‘when’ (past, present or future). The other relates to whether an event or process is open or closed.

The examples below illustrate the distinction between ‘open’ and ‘closed’ events:

**How long were you at Melbourne Uni?**

**Simple past / closed event:** the other person has already graduated.

**How long have you been at Melbourne Uni?**

**Present perfect / open event:** the other person is still engaged on his / her course.

**What do tenses do?**

Verb tenses present a relationship between

- the present moment (now), and,
- another moment or period in time (which may be long or short).

These moments or periods may be in the past, present or future.

**Tenses manage time by placing them within particular relationships or ‘time frameworks’**.

As a generalisation: in various types of scientific writing, some time frameworks are more commonly used than others. Their frequency varies from one section of a paper or report to another, and they can also vary between one scientific discipline and another.

The next section gives some advice about the various tenses.

---

**Abstract**

This usually refers to your unpublished results and uses the **past tense**.

**Introduction**

Your introduction needs to include background information which is generally accepted as fact in a discipline. You also need to explain why the research you are reporting is important. It is usually presented in the **present tense**. Example:

Genomics **provides** crucial information for rational drug design.

You will need to refer to existing research relevant to your work, and you can indicate your opinion of the research you are writing about by careful tense selection.

For example, when you use the **present tense** you are indicating to the reader that you believe that the research findings are still true and relevant, even though the original research may have been conducted some time ago. Example:

Many of the lakes and wetlands in the region **are located** in craters or valleys blocked by early Pliocene lava flows (Ollier & Joyce, 1964).

**Present perfect tense to report research**

If you use **present perfect tense** in your introduction when you refer to previous research, you communicate ‘recency’ or ‘currency’. Currency may be **positive** (asserting that previous studies have established a firm research foundation) or **negative** (asserting that not enough relevant or valid work has yet been done).

Positive and negative currency can even be asserted in the same sentence, as in the example below (which uses the **passive voice**): Example:

A great deal of research **has been conducted** on the basic techniques of nuclear transfer, but few experiments **have been carried out** to discover the most appropriate age of the cytoplasm to support nuclear transfer most effectively.
This suggests that you believe that more experiments are necessary. The existence of a ‘research gap’ is further emphasised by the phrase: ‘but few experiments’.

Methods

Past tense to describe what was done

In your methods section it is customary to use a form of the simple past tense to describe what you did in your study. Passive voice is often used. Examples:

Total phosphorous (TP) and total nitrogen (TN) were measured in the laboratory using standard procedures.

The standard protocol was followed for the preparation of the media from stock solutions.

The two previous examples are in the past tense, but in the passive voice. Have a look at the following examples in the past passive and past active voice.

Past passive

Three 2 litre samples were taken at a depth of between 0.1 and 0.5 m at the down-wind end of each wetland.

Past active

Each of the three groups took 2 litre samples at a depth of between 0.1 and 0.5m at the down-wind end of each wetland.

From your reading, which voice do you think is most often used in your scientific discipline – active, or passive?

Present tense for diagrams and figures

If you use figures or diagrams to help explain what you did, refer to the figure or diagram using the present tense. Examples:

Table 1 above demonstrates the success of cloning in various animal species.

Figure 2 below shows methylation in mouse 2-cell embryos.

Results

Past tense for results obtained

In the results section, use the past tense to detail the results you obtained. Examples:

Overall, more than 70% of the insects collected were non-phytophagous.

Results indicated that prolonged exposure to ultra-violet radiation had a positive correlation with the development of melanomas.

Following activation of NT oocytes with strontium, the cell cycle resumed in both groups.

Present tense to refer to figures, tables and graphs

As in the previous sections, use the present tense when you refer to figures, tables and graphs. Examples:

Figure 1 displays the comparative variation in the morphology of donor chromatin in both age groups of oocytes.

Table 1 below shows the stream flows calculated for each stream using Equation 1.

Discussion

Present tense to explain significance of results

In your discussion section, you will explain the significance of the results. The present tense is normally used for this. Example:

Removal of vegetation for agricultural purposes appears to negatively affect the water quality of streams.

Past tense to summarise findings, with present tense to interpret results

Writers may use the past tense to summarise their findings, in combination with the present tense to explain or interpret what the results mean. Examples:

As the maxima and minima did not correspond to high and low tides, it is possible that the patterns observed may not be the result of mixing of waters with different concentrations.

Leaf carbon and phenolic content did not differ across sites, indicating that the response of secondary plant chemicals such as phenolics to water is complex.

In Example 1, the phrases ‘it is possible that’ and ‘may not be’ are used to indicate that other explanations are possible. This is an example of the use of limiting words to discuss findings in an academically tentative way.

Example 2 is less tentative. If you make a statement such as this, you are completely confident that your results and conclusion are correct.

Conclusion

A combination of tenses to highlight past research and future directions

In the final section of your thesis or report you summarise the main findings and the major implications of the study, point out any limitations, and offer suggestions for future research. To do these things you may use a combination of tenses. Example:

Although the study found evidence of tillage and irrigation within the study area, from the data collected it was not possible to determine if the effects of agriculture upstream cause (or caused) higher levels of total nitrogen downstream. Further studies are therefore necessary to determine the effects of agriculture on the health of Stringybark Creek.

Further Resources

Transition words show the relationship between ideas, within a sentence or between sentences and paragraphs.

### Common transition word categories

#### Similarity/Addition
Adds information that agrees with, reinforces, or contributes to a previous idea.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>likewise</td>
<td>also</td>
</tr>
<tr>
<td>furthermore</td>
<td>as well</td>
</tr>
<tr>
<td>moreover</td>
<td>similarly</td>
</tr>
<tr>
<td>further</td>
<td>in fact</td>
</tr>
<tr>
<td>additionally</td>
<td>again</td>
</tr>
<tr>
<td>equally important</td>
<td>indeed</td>
</tr>
<tr>
<td>in the same way</td>
<td>in addition</td>
</tr>
</tbody>
</table>

#### Contrast
Establishes an opposition between ideas; often leads to a conclusion or decision between them.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>although</td>
<td>despite</td>
</tr>
<tr>
<td>conversely</td>
<td>however</td>
</tr>
<tr>
<td>even so</td>
<td>instead</td>
</tr>
<tr>
<td>even if</td>
<td>though</td>
</tr>
<tr>
<td>irrespective</td>
<td>whereas</td>
</tr>
<tr>
<td>nevertheless</td>
<td>while</td>
</tr>
<tr>
<td>notwithstanding</td>
<td>still</td>
</tr>
<tr>
<td>on the contrary</td>
<td>yet</td>
</tr>
<tr>
<td>regardless</td>
<td>rather</td>
</tr>
<tr>
<td>on the one hand</td>
<td>on the other hand</td>
</tr>
</tbody>
</table>

#### Qualification
Adds a condition to the idea; sets limits or boundaries for the idea; considers possible opposition.

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>for the most part</td>
<td>sometimes</td>
</tr>
<tr>
<td>generally</td>
<td>granted</td>
</tr>
<tr>
<td>often</td>
<td>considering</td>
</tr>
<tr>
<td>ordinarily</td>
<td>of course</td>
</tr>
<tr>
<td>usually</td>
<td>admittedly</td>
</tr>
<tr>
<td>rarely</td>
<td>unfortunately</td>
</tr>
<tr>
<td>occasionally</td>
<td>fortunately</td>
</tr>
</tbody>
</table>

#### Sequence and causation
Establishes an order for ideas; shows how one idea follows from another.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>first</td>
<td>thus</td>
</tr>
<tr>
<td>second</td>
<td>therefore</td>
</tr>
<tr>
<td>third</td>
<td>then</td>
</tr>
<tr>
<td>consequently</td>
<td>hence</td>
</tr>
<tr>
<td>subsequently</td>
<td>next</td>
</tr>
<tr>
<td>as a result</td>
<td>before</td>
</tr>
<tr>
<td>accordingly</td>
<td>for this reason</td>
</tr>
<tr>
<td>since</td>
<td>because</td>
</tr>
</tbody>
</table>

#### Introduction
Brings an idea into the discussion.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>firstly</td>
<td>with regard to</td>
</tr>
<tr>
<td>to begin</td>
<td>primarily</td>
</tr>
<tr>
<td>in the first place</td>
<td>similarly</td>
</tr>
<tr>
<td>initially</td>
<td>regarding</td>
</tr>
<tr>
<td>as for</td>
<td>concerning</td>
</tr>
<tr>
<td>in the case of</td>
<td>when it comes to</td>
</tr>
</tbody>
</table>

#### Emphasis
Places more importance on the idea, drawing the reader’s focus.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>notably</td>
<td>in fact</td>
</tr>
<tr>
<td>most significantly</td>
<td>specifically</td>
</tr>
<tr>
<td>primarily</td>
<td>in particular</td>
</tr>
<tr>
<td>particularly</td>
<td>most importantly</td>
</tr>
<tr>
<td>above all</td>
<td>essentially</td>
</tr>
<tr>
<td>most of all</td>
<td>certainly</td>
</tr>
</tbody>
</table>

#### Conclusion
Shows that the discussion of an idea is complete.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>finally</td>
<td>to conclude</td>
</tr>
<tr>
<td>ultimately</td>
<td>in conclusion</td>
</tr>
<tr>
<td>in the end</td>
<td>in summary</td>
</tr>
<tr>
<td>in any case</td>
<td>to sum up</td>
</tr>
<tr>
<td>therefore</td>
<td>without a doubt</td>
</tr>
<tr>
<td>thus</td>
<td>regardless</td>
</tr>
</tbody>
</table>

#### Exemplification
Introduces an example of a previous idea.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>to illustrate</td>
<td>take a look at</td>
</tr>
<tr>
<td>for instance</td>
<td>such as</td>
</tr>
<tr>
<td>for example</td>
<td>one such</td>
</tr>
<tr>
<td>an example would be</td>
<td>to demonstrate</td>
</tr>
<tr>
<td>in one such case</td>
<td>in this case</td>
</tr>
</tbody>
</table>
Choosing transition words

• Think about the relationship you want to convey.
  • What is the connection between this sentence and the sentence or paragraph before it?
  • What do you want the reader to understand about the relationship between them?

• Select a category and a word within that category which best conveys that information.
  • If the relationship is too complex to explain with just one word, try using a whole phrase or even a whole sentence.
  • Avoid repetition; use different transition words in the same category if necessary.

• Remember that transition words can change the whole meaning of a sentence.
  • The wrong transition word can make a sentence confusing or even nonsensical.

Placing transition words

There are three options for placing transition words:

• The beginning of a sentence
  • This emphasizes the relationship between the ideas, by making the transition word the focus for the reader.

• The middle of a sentence (after a particular word or idea)
  • Emphasizes the preceding idea or word.
  • Useful when introducing an idea for the first time.

• The end of a sentence.
  • De-emphasizes the relationship and emphasizes the preceding idea.
  • Least common placement for transition words; use carefully.

Example (with transitions):

When it comes to tech support, there is often a script that employees follow to deal with common problems. First, they suggest that you turn your device off and then turn it back on; finally, if the problem is still there, they will actually try to solve it.

In fact, this does usually solve the problem, although it can be frustrating if you know there's a real issue - for example, if you've already tried restarting your device, and it didn't work. Above all, try to remember that tech support is ultimately just as frustrating for the support staff on the other end of the phone as it is for you!

Example (with no transitions):

There is a script that tech support employees follow to deal with common problems. They suggest that you turn your device off and turn it back on. If the problem is still there, they will actually try to solve it.

This does solve the problem. It can be frustrating if you know there's a real issue - if you've already tried restarting your device and it didn't work. Try to remember that tech support is just as frustrating for the support staff on the other end of the phone as it is for you!
Reverse Outlines
Posted on February 9, 2011 | 6 Comments

Over the coming weeks, I will discuss five key strategies for improving academic writing. I have chosen these five simply because they are the ones that I most frequently turn to in my work with students. I have ordered them roughly from global to local, starting with a strategy for overall coherence and ending with common sentence problems. It is generally more efficient to treat broader structural issues before spending time on individual sentences; the structural edit, done right, can dramatically change a text. You do not want to expend energy on sentence-level improvements before making some broader decisions about what will stay and what will go.

The first strategy—and definitely my favourite—is the reverse outline. Reverse outlines are outlines that we create from an existing text. Regardless of whether you create an outline before you write, creating one after you have written a first draft can be invaluable. A reverse outline will reveal the structure—and thus the structural problems—of a text. The steps to creating a reverse outlines are simple:

1. Number your paragraphs. (Paragraphs are the essential unit of analysis here; next week we will look at why paragraphs are so important.)

2. Identify the topic of each paragraph. At this point, you can also make note of the following:
   a. Is there a recognizable topic sentence?
   b. How long is the paragraph?
      i. Does the topic seem sufficiently developed?
      ii. Is there more than one topic in the paragraph?

3. Arrange these topics in an outline.

4. Analyze this outline, assessing the logic (where elements have been placed in relation to one another) and the proportion (how much space is being devoted to each element).

5. Use this analysis to create a revised outline.

6. Use this revised outline to reorganize your text.

7. Go back to your answers in 2a and 2b to help you create topic sentences and cohesion in your paragraphs.

This strategy is effective because it creates an objective distance between you and your text. A reverse outline acts as a way into a text that might otherwise resist our editorial efforts. As we discussed when we looked at revision, we often find our drafts disconcerting: we know they are flawed but making changes can seem risky. A reverse outline can give us purpose and direction as we undertake the valuable process of restructuring our work.