

Information Technology

FIT5190 Introduction to IT Research Methods

Lecture 5

Writing Journal Papers

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Learning objectives

- Understand
 - the need to develop good writing skills for academic journals
 - the guidelines for good English writing
 - the process of writing refereed journal papers
 - the content and presentation requirements of good journal papers
 - what to write for the main components of a journal paper
- Be able to
 - write a publishable journal paper

Overview

- This lecture deals with how to write up research results for publication in refereed scholarly journals.
- The lecture helps students to understand the process of writing refereed journal papers.
- The lecture provides guidelines for writing well when English is not our first language.

Lecturing objectives

- To share with students my experience of writing and publishing refereed journal papers.
- To help students write well and write better.
- To help students build up the knowledge as well as maintain momentum and confidence in writing publishable journal papers.
- To help students increase the chance of getting published in refereed scholarly journals.

Outline

Topics

- 1. English writing for academic journals
- 2. Producing the manuscript
- 3. Concluding messages

Topic 1

English writing for academic journals

- 1. English writing for academic journals
- 2. Producing the manuscript
- 3. Concluding messages



Writing well

(1/2)

- Writing a research paper is demanding.
- Writing (well) will be hard work perhaps the hardest work we do for publishing our research.
- To learn to write, we must learn to read.
 To learn to write well, we should read good writing.
- "The best way to become a successful writer is to read good writing, remember it, and then forget where you remember it from"

- Gene Fowler (1890-1960)

Writing well

(2/2)

- One key to being a good academic writer is having the patience to reread and rewrite.
- Write, rewrite and rewrite.

Writing, and subsequently getting published is 90 per cent perspiration and 10 per cent inspiration.

For the purpose of academic writing, writing well is writing clearly and concisely.

Good academic writing is clear and concise.

When English is not our first language (1/2)

English is a difficult language to write well; native English speakers have problems themselves.

- P. Stapleton (1987, p. 39)

Worldwide, many researchers whose first language is not English speak and write better English than a lot of British, American, Australian or English-speaking Canadian authors.

- P. Sprent (1995)

However, there are others who have problems, especially with details of grammar or idiom.

If English is not our first language, do our best.

Note that some native English speakers do not write as well in English as we may do.

When English is not our first language (2/2)

- The editor of a journal who is not sympathetic to such difficulties is not a good editor.
- A common attitude of many journal editors:
- ... poor English (by non-English speaking authors) in itself is not a reason for rejection, but the better the English the easier it is for the reviewers to read and evaluate a manuscript, as improper English often leads to misunderstanding.

- Hinkelmann (1993)

- The journal editors or publishers may correct our English if they can understand what we are trying to say.
- As a non-native English speaker, we should learn to express our basic ideas in understandable English and take heart to write our research in English.

Problems with translation

(1/3)

How are you?

怎么 是 妳?

How old are you?

怎么 老 是 妳?



Problems with translation

(2/3)

• Examples of inscrutable ("non-understandable")
Oriental English

Help Oneself Terminating Machine

Enterness

Friend Changing Club

Problems with translation

(3/3)

Examples of inscrutable ("non-understandable") Oriental English



Translation (literally or not) may make it all wrong if done inappropriately.

Some common difficulties with using English for non-native speakers

- Matching singular (plural) nouns to singular (plural) verbs, and the use of countable nouns.
- When to use the definite article (the) or an indefinite article (a, an).
- Improper or irrelevant use of pronouns.
- Uncertainty about using the active or passive voice.
- Choosing the exact word and put it in the right place.

Matching singular (plural) nouns to singular (plural) verbs, and the use of countable nouns

Decision making Making decisions

Life is a decision making process.

Life is about making decisions.

Life itself is a decision making process.

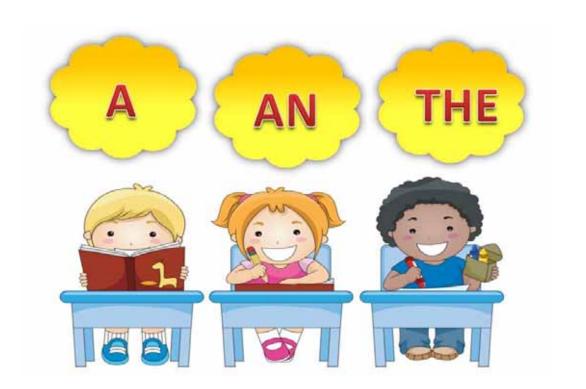
Life is a decision making process in itself.

When to use the definite article (the) or an indefinite article (a, an)

"A study on ..."

"The study on ..."

Redundant?



Improper or irrelevant use of pronouns

- Unclear pronoun references will slow a reader down and quickly distract the reader from your meaning.
- Ambiguous pronouns
- The result of the model depends on the choice of its parameters and it cannot be generalised.
 - Does it refer to the result, the model, or the choice?
- One general solution is to repeat the noun rather than use a pronoun.
 - The result of the model depends on the choice of its parameters and *the result* cannot be generalised.

The result of the model depends on the choice of its parameters. As such *the result* cannot be generalised.

Keeping the pair together

- Use the just-in-time principle and keep the following pairs closely together:
- For a sentence or paragraph
 - A verb and its subject
 - A verb and its object
 - A noun/phrase and its pronoun
 - For the main body of a paper
 - A verb and its subject
 - An acronym and its definition
 - An unfamiliar term and its definition
 - Background information and the text it clarifies or justifies

Uncertainty about using the active or passive voice

- If the subject acts, the voice is active.
 If the subject is acted on, the voice is passive.
- The active voice is preferred, as it is normally livelier, more direct, and more concise (shorter).
- The passive voice should be used if the actor is less important than what is acted on.

We conducted an empirical study to examine whether the system can be used in China.

An empirical study was conducted to examine whether China can use the system.

Polishing English expressions

If item it is dropped, damages may be incurred.

If the item is dropped, damage may occur.

Dropping the item may damage it.

Not just a matter of English

Cultural differences in way of thinking and style of writing

English	Chinese
Deductive, direct	Inductive, indirect
Put purpose and important information first	A delayed introduction of purpose
Linear	Non-linear
analytical, sequential, cause-and-effect	no direction, no starting points, unrelated
Coherent	Incoherent

Put the most important information first

She went to see a movie with her sister last night.

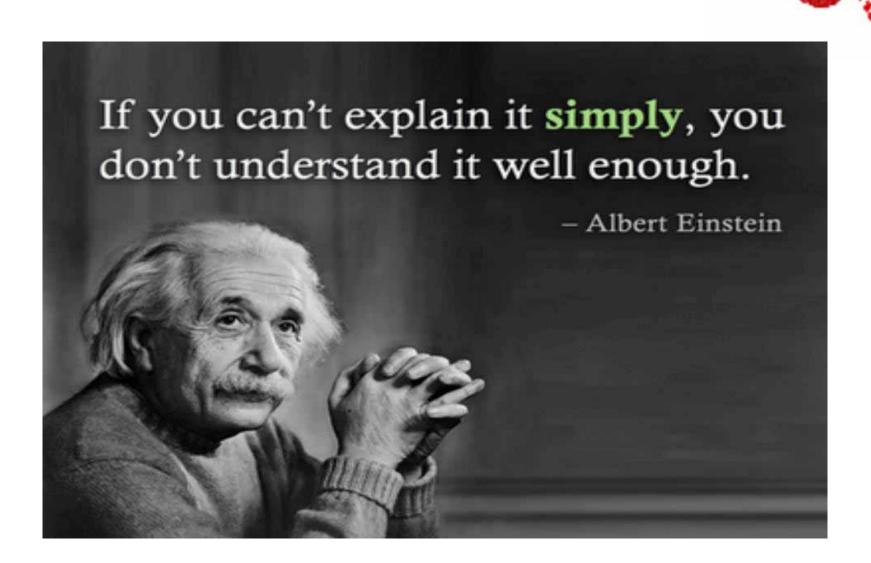
Last night she and her sister went to see a movie.

She and her sister went to see a movie last night.

She and her sister went to see the movie last night.

Plain English (1/2)

KISS – Keep it simple, stupid.



Plain English (2/2)

- Intelligent readers are impressed by ideas and clear expressions, not by elaborate constructions and excess words.
- Good writing saves the reader's time and your reputation.
 - If you make the life of the journal editor and reviewers easy, they will make your life easy too.
- There is no universally accepted rule for writing essential information clearly; however, there are guidelines for improving clarity.
- Good guidelines will make your writing easier and help you produce results that are more readily understood.

Plain English guidelines

(1/2)

Be concise and write short sentences.

Over the whole document, make the average sentence length 15 to 20 words.

Prefer plain words.

Use words your readers are likely to understand.

Ask yourself if you are using the plainest word that will say precisely what you mean. Do not use technical words merely to impress.

Write tight.

Use only as many words as you really need.

Keep related sentence elements together; keep unrelated elements apart.

Place modifiers as close as possible to the words they are intended to modify.

Use vigorous verbs.

Use the clearest, crispest, liveliest verb to express your thoughts.

Do not make nouns out of good, strong "working verbs."

Favour the active voice and present tense.

Prefer the active voice unless there is a good reason for using the passive.

Personal vs. impersonal

Active vs. passive (personal vs. impersonal) voice

It is expected that students will build up confidence in writing publishable journal papers and develop skills for facilitating their journey to publication in prestigious international journals.

I (the lecturer) expect that students will build up confidence in writing publishable journal papers and develop skills for facilitating their journey to publication in prestigious international journals.

Students are expected to build up confidence in writing publishable journal papers and develop skills for facilitating their journey to publication in prestigious international journals.

Plain English guidelines

(2/2)

Prefer positive to negative.

Put your points positively when you can.

Use good punctuation.

Put accurate punctuation at the heart of your writing.

Maintain consistency in style.

Avoid unnecessary shifts of tense, subject, voice, or point of view.

Arrange your material logically to increase its readability.

Always begin with ideas the reader can readily understand.

Help the reader to grasp the important information early and to navigate through the document easily.

Present difficult material one step at a time, and do not skip any steps.

Be specific.

Use concrete terms instead of generalisations.

Be concise

Omitting unnecessary words

- "Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts. This requires not that the writer make all his sentences short, or that he avoid all detail and treat his subjects only in outline, but that every word tell."
 - Strunk Jr W, White EB (2000) The Elements of Style, 4th ed. Allyn &Bacon, New York.
 - Positive statement is more concise than negative, and the active voice more concise than the passive.
 - Use plain words
 - Prefer "use" to "utilize" or "make use of".

Be specific and to the point

(1/3)

"If you told me to write a love song tonight, I'd have a lot of trouble. But if you tell me to write a love song about a girl with a red dress who goes into a bar and is on her fifth Martini and is falling off her chair, that's a lot easier, and it makes me free to say anything I want."



- Stephen Sondheim

- Generalities hold most people's interest only for a limited time.
- Relevant generalities are important, but they are less interesting than specifics.

The key is to get focused.

Be specific and to the point

(2/3)

Getting focused

Make only one main point at a time.

- Focus on the logic of your thoughts about the main point (idea) and express it in a deductive ("linear") way.
- Getting the points
 - Your reading (or listening) skills will improve greatly if you can get the main points quickly from what you read (or hear).
 - This can be achieved by doing the same in your writing.
- To begin with, try to write one "complete sentence" (preferably a simple sentence) at a time.
 - That is, use a "full stop" in the right place to break up your thoughts into structured sentences, linked coherently.

Be specific and to the point

(3/3)

Always grab the reader by the throat in the first paragraph, sink your thumbs into his windpipe in the second, and hold him against the wall until the tag line.



Paul O'Nei

- Cited from Black et al. (1998) "500 Tips for Getting Publishing", p. 145.

The last thing one knows in constructing a work is what to put first.

- A simple truth recorded by the famous French mathematician, Blaise Pascal (1623-62).

This is one reason why so many scientists and researchers find it hard to write (well).

Topic 2

Producing the manuscript

- 1. English writing for academic journals
- 2. Producing the manuscript
- 3. Concluding messages



Writing for publication

(1/2)

- Publication demands highly disciplined writing, thus requiring clear and precise thinking.
- Researchers should develop writing skills that
 - make their manuscripts readable (understood easily),
 - make their manuscripts interesting,
 - greatly improve their chances of becoming published.
- The best route to journal publication follows two simple rules: have something worthwhile (new and important) to say, and say it well.
- A journal publication should be described as both "good" and "original", but not the following:
 - "The parts that are good are not original and the parts that are original are not good."

Writing for publication

(2/2)

- Originality is essential in journal paper content.
 Clarity is essential in journal paper writing (presentation).
- "If they haven't heard it before, it's original."

- Gene Fowler (1890-1960)

 When something is being said for the first time, clarity is essential.

Readability (easy to read; easy to understand)

- Familiar words, reasonably short sentences, key points easy to follow logically.
- Journal editors will happily settle for **clarity**; however, we should try and move beyond clarity to **grace and elegance**.

Content requirements of good journal papers

- Originality advances in knowledge (problem, approach and findings)
- Significance contribution to the field,
 importance to the stock of knowledge
- Relevance existing state of knowledge
- Soundness (methodology) logically and technically
- Applicability general (potential) application to relevant problems

Definitions of originality for higher degree research (1/3)

- Setting down a major piece of new information in writing for the first time.
- Continuing a previously original piece of work.
- Carrying out original work designed by the supervisor.
- Providing a single original technique, observation or result in an otherwise unoriginal but competent piece of research.
- Having many original ideas, methods and interpretations all performed by others under the direction of the postgraduate.
- Showing originality in testing someone else's idea.

Francis, J. (1976). Supervision and examination of higher degree students. *Bulletin of the University of London*, 31, 3-6.

Definitions of originality for higher degree research (2/3)

- Carrying out empirical work that hasn't been done before.
- Making a synthesis that hasn't been made before.
- Using already known material but with a new interpretation.
- Trying out something in this country that has previously only been done in other countries.
- Taking a particular technique and applying it in a new area.

Phillips E.M., Pugh, D. (2005). *How to Get a PhD: A Handbook for Students and Their Supervisors*, 4th edition. Open University Press, Maidenhead.

(based on interviews with Australian students, supervisors and examiners)

Definitions of originality for higher degree research (3/3)

- Bringing new evidence to bear on an old issue.
- Being cross-disciplinary and using different methodologies.
- Looking at areas that people in the discipline haven't looked at before.
- Adding to knowledge in a way that hasn't previously been done before.

Phillips E.M., Pugh, D. (2005). *How to get a PhD: A handbook for students and their supervisors*, 4th edition. Open University Press, Maidenhead.

(based on interviews with Australian students, supervisors and examiners)

Writing a good paper

(1/3)

Clarity and readability are essential to a good paper, requiring that the paper **be logically structured** with flow of argument:

- Consistency style (in terms of changes in tense, subject, active or passive voice) and notation
- Relevance (objective, existing state of knowledge)
- Specific with clear focus
- Justification

Writing a good paper

(2/3)

- To make a paper easy to read and understand, a clear structure should apply not only to the overall paper but also to each individual section, paragraph and sentence.
- Use a deductive, direct way of thinking and writing style.
 - Put purpose and important information first, then explain it more
 - Deductive reasoning works from the more general to the more specific.
 - Linear, sequential, analytical, cause-and-effect
 - Coherent
 - Sentences relating to a certain point or idea are linked together, often in paragraphs.

Writing a good paper

(3/3)

- Identify the main "story" ("selling point") of your work and present/explain it in the Title, Abstract, Introduction and in the text, in an increasingly elaborative manner.
 - Tell the story by taking the reader through the steps.
- Focus on openings opening paragraphs, opening sentences.
 - For each section of a paper, impose clarity (simplicity) on first paragraph, first sentence.

Writing a paragraph effectively (1/2)

- Each paragraph should contain one main point or idea.
- The first sentence should, if possible, introduce this point or idea (clearly and concisely).
- Other sentences should support the main point or idea by explaining it more, giving examples (or cited references), and linking it to other paragraphs if applicable.
- It is very dangerous to introduce a second point or idea, as this will almost certainly confuse the reader.

- Freeman, R., Meed, J. (1993). How to Study Effectively. Collins Educational, London, p. 61.

 Points (arguments) or ideas should always be supported with evidence, whether from your own research or as quotations from other sources.

Writing a paragraph effectively (2/2)

- As a rule, begin each paragraph with a topic sentence; end it in conformity with the beginning
 - Strunk, Jr W., White, E.B. (2000). *The Elements of Style, 4th ed.* Allyn &Bacon, New York.
- To help the reader better understand the purpose of each paragraph particularly in exposition and argument, an effective paragraph structure is as follows:
 - The topic sentence comes at or near the beginning;
 - The succeeding sentences explain or establish or develop or support the statement made in the topic sentence;
 - The final sentence either emphasizes the thought of the topic sentence or states some important consequence.
- If the paragraph forms part of a larger composition, its relation to what precedes, or its function as a part of the whole, may need to be expressed.

Title and abstract

(1/2)

- The title of a paper should be informative, interesting, yet brief (ideally 12 words or fewer). Some journals will ask the author to provide a short running title if the title of the paper is too long.
- The typical abstract length designated by the journal range from 50 to 150 words. The abstract should be selfcontained and standalone, without the need of referring to the main text for clarity.
- The abstract should focus on describing the content of the paper.
 - A brief reference to background may be needed to provide a context.

Title and abstract

(2/2)

- The abstract summarises what the paper is about clearly and specifically, using short, crisp sentences with plain words. It should summarise all the key points of the paper, including:
 - The objective of the paper;
 - The main points of the argument and the methodology,
 which may include the critical concepts in the paper;
 - The main conclusions and implications, in particular the specific contribution of the paper to the literature.
- Make sure what both title and abstract promise is what the paper delivers.
- Identify three to five keywords to help you focus on the most important subjects of your paper.

Structured abstract

Human Factors

- Objective
- Background
- Methods
- Results
- Conclusion
- Application

Emerald journals

- Purpose
- Design/methodology/approach
- Findings
- Research limitations/implications
- Practical implications
- Originality/value

Introduction (1/2)

 The three elements of an introduction are problem, context, and solution.

- A good introduction should establish the direction and critical content of what follows, thus getting readers interested.
- The introduction should be long enough (e.g. one or two pages long) to explain what is to be discussed in the paper concisely and specifically.
 - Keep the supporting evidence for the main body.

Introduction (2/2)

The introduction may include the following:

- Define the problem being considered and explain why you consider it, thus establishing the objective of the paper;
- Describe the context of the problem (background information), usually with the aid of cited references;
- Explain briefly major technical concepts and terms used in the paper;
- State briefly the approach or solution to the problem;
- Highlight major research findings or conclusions if appropriate;
- Outline what follows in the paper (how the main research work is organised and linked).

Context (background) information

- Global background information applicable to the whole paper.
- **Local** or just-in-time background information useful only to one section or paragraph of the paper.
- Include only the global background information in the Introduction to decrease the demands on the reader's memory.
 - Traditionally the global information includes the context material the reader needs to understand the relevance (existing state of knowledge) and contribution (significance to the stock of knowledge) of the paper.
- An effective way to provide global context information is to describe what has been done specifically that lead to your own research (i.e. what needs to be done).
 - If an important gap in the field is identified, state how your research will contribute to its resolution in a nontrivial way.
- The local background information should immediately precede or follow what requires an explanation or justification in the main body of a paper, such as a term, an equation, a concept, a research hypothesis, a technique, or a methodology.

Main body (1/3)

- Divide the body of the paper into sections for explaining what you did and how you did it.
- Each section corresponds to a major subject or task undertaken.
- Acronyms or abbreviations allow writing to be more concise.
- However, concise is unhelpful if it decreases clarity.
 - Write out an acronym or abbreviation the first time it appears and enclosed it in parentheses immediately afterwards.
 - If an acronym is used only a couple of times in the paper, it's better not to use one at all (unless it is better known than its definition such as CD or DVD).
 - Avoid acronyms in headings and subheadings because readers often read the structure of a paper before reading the content.
 - Be conservative. Define all acronyms except those commonly understood by the readers of the journal.

Main body

(2/3)

Research methodology

(How do you address the problem?)

- Elaborate underlying concepts and methods in a logical sequence and make sure there are no gaps in the development or reasoning process.
- Justify your methodology with supporting evidence.
- Establish the relationship between your methodology and related approaches if appropriate, thus linking the new material with existing concepts.

Main body

(3/3)

- Results and analysis (What do you find?)
 - Provide data logically to support or illustrate your methodology and its results, using tables or figures where appropriate.
 - Explain the results implied in the tables, but do not repeat what is obvious from the tables.
 - Provide evidence to support research findings or main points of your argument.
- **Tables and figures** should be used as appropriate to illustrate and support main points and to summarise results.
- **Discussion** (What do your findings mean?)
 - Discuss options with reasons.
 - Discuss the special or interesting points observed from the research process.
 - Discuss the limitations (e.g. data or conditions required) and the implications (e.g. applications in other areas or applicability to practical problems) of your methodology.

"So what?"

- Without properly answering this question is one of the most common reasons for reviewers to reject a paper.
- This question concerns the practical significance of a result, which is distinct from its methodological significance.
- How important is the paper to the stock of knowledge?
- If the objective of the paper is achieved, how will knowledge be advanced?

Conclusion

- A good conclusion should stand on its own.
- The conclusion echoes the introduction, but do not reiterate information from the introduction. The conclusion should focus on the significance and the implications of the paper.
- The conclusion summarises specifically (a) what have been carried out and (b) what have been achieved as a result of the research work, in relation to the problem addressed and the methodology used.
- The conclusion should include the contribution of the paper to the literature, including the significance of the result, methodological or practical or both.

Acknowledgements

- Acknowledge organisations that funded the research, and persons who have assisted in the study.
- Acknowledge the referees (even anonymous) and the editor (if appropriate), after the paper is accepted.

References and bibliography

- Follow the journal style exactly.
- References are published works that are readily accessible.
- References are those specifically referenced (cited) in the text of the article.
- Do not reference anything that is common knowledge.
- References are used primarily to
 - acknowledge significant sources;
 - articulate where the field is positioned currently;
 - place your research work in context;
 - demonstrate your understanding of the existing state of knowledge;
 - support your research work.
- A bibliography lists works that are found to be relevant to the research topic. Bibliographies are seldom necessary or even allowed in scholarly articles.

Preparing case-oriented and case study papers

- Guidelines for OR practice papers: case-oriented and case studies Editorial January 1999, *Journal of the Operational Research Society*, 50(1), pp. 1-2.
- If new theory is involved, existing guidelines apply.
- If theory is not new, it should be "linked" to the literature and address sufficient of the following:
 - relevant context information, both human and technical
 - discussion of the modeling of the problem, including any novel features and validation/verification issues
 - discussion of implementation issues
 - the estimated and actual savings/benefits achieved
 - lessons learned of relevance to future practice
- In both instances, reflections on the intervention, including the successful and unsuccessful aspects would enrich the paper.

Topic 3

Concluding messages

- 1. English writing for academic journals
- 2. Producing the manuscript
- 3. Concluding messages



Writing and thinking

(1/2)

- We do not write well when we do not think clearly.
- Think carefully about what you want to produce before you write. Then, write to help you rethink.

We write to think better, and as we think better we write better.

Good thinking and good writing are intrinsically linked.

"How can I know what I think until I see what I write?"

"How can I improve what I write until I find out what I think?"

Writing itself facilitates thinking, thus helping you clarify your "logic" by reasoning or by intuition or by both.

Writing and thinking

(2/2)

- Do not fall in love with anything you have written.
- Be willing to cut, revise, and reorganise every word of your draft.
- The right time to decide when to begin writing depends upon your thinking and writing habits.
 - Identify the times, places, and conditions that most facilitate your thinking and writing.
 - Identify strategies for protecting and enhancing your best writing times.
- Although writing is time-consuming and difficult, you should anticipate getting better at it and discovering more pleasure in it.

Developing the sense of good writing (1/2)

 "Good writers are often poor at reiterating the rules of grammar. They know that a sentence does not sound just right, but they cannot tell you why. They can, however, rewrite it until it is perfect."

- Abby Day (1996, p. 128)

 "Developing writing skills is like any form of training. It takes time, patience and a regular routine to reinforce the skills. Keep yourself fit by writing regularly."

- Abby Day (1996, p. 129)

- You need to develop your personal style, as how you write is a personal matter.
- Take your time and don't give up. Believe in yourself.

Developing the sense of good writing (2/2)

- "How-to-write" guidelines and books and the like may not necessarily help us write our own papers well.
- In particular, these books do not always provide an answer to a specific problem.
- In a sense, how-to-write books to a writer are much like how-to-cook books or recipes to a cook.
- We cannot become a good cook by merely reading howto-cook books.
- To be a good cook (or writer), we need to develop the "sense" or "feeling" (intuition) of the logic of cooking (or writing).
- This means that we need to "transform" the logic of writing from a reasoning (rational) process to an intuitive thought, thus becoming our second nature.

Learning by doing: assignments

- Assignment 1: Research Writing Tasks (30%)
 - 1. Summarise your research with one sentence. Summarise your research with one paragraph consisting of structured ("linked") sentences.
 - 2. State the problem with one or two paragraphs.
 - 3. Place your research in context with one or two paragraphs.
- Assignment 2: Critical Review of Published Research (30%)
- Assignment 3: Overview of a Research Project (40%)

Publishing by doing

- Writing is not the objective, and publishing is.
- Conducting research and writing it up are merely the means to the end – publishing.
- A Chinese Proverb
 - I hear and I forget;
 - I see and I remember;
 - I do and I understand.
- To be continued with the "On the Publication Road" lecture.

Recommended reading

- 1. Day, Abby (2008). *How to Get Research Published in Journals*, second edition. Gower, Hampshire, England.
- 2. Day, Robert A. (2006). *How to Write and Publish a Scientific Paper*, 6th edition. Cambridge University Press, Melbourne, Australia. (Chapters 1, 4-14, 17-19, 25, 26, 28-35, and Appendices 1-7.)
- 3. Black, D., Brown, S., Day, A., Race, P. (1998). *500 Tips for Getting Published: a guide for educators, researchers and professionals*. Kogan Page, London. (Chapters 1, 2, 4, 5)
- 4. Booth, W.C., Colomb, G.G., Williams, J.M. (2008). *The Craft of Research*, third edition. The University of Chicago Press, Chicago. (Chapters 7-10, 13)
- 5. Stapleton, P. (1987). Writing Research Papers An Easy Guide for Non-Native-English Speakers. Australian Centre for International Agricultural Research, Canberra.