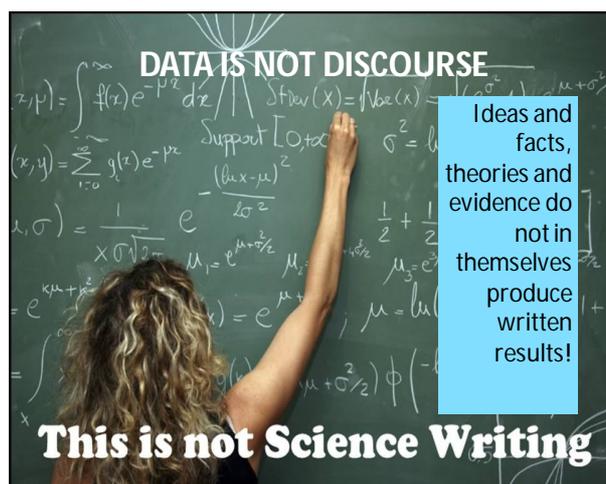


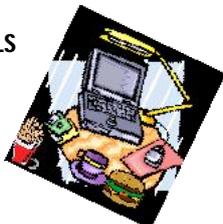
## WRITING-UP RESEARCH Tools to aid the brain

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Communication by Specialists  
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### THIS PRESENTATION

- WHAT IS "WRITING"?
- A FUNDAMENTAL METHOD
- WRITING **STRATEGIES & TOOLS**
- WRITING **TECHNIQUES**
- ABOUT **THE WORKSHOP**



### WHAT IS 'WRITING'?

Understandable text that allows **others to follow your train of thought**

**Systematic expression** that **communicates meanings** in a **common language**

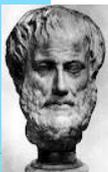
*Non-fiction modes:*

- EXPOSITION – defining the **topic**
- DESCRIPTION – outlining the **information**
- ANALYSIS – **examining** the findings
- INTERPRETATION – **explaining** what's been shown
- {= **PERSUASION**} – **all of the above!**

### RHETORIC – THE ART OF DISCOURSE

In his work, the *Rhetoric*, Ancient Greek philosopher Aristotle argued that all writing was **basically persuasive**.

- One uses **ethos** (appeal to authority)
- pathos** (emotion and imagination), and
- logos** (evidence-based reasoning).
- Do all three apply in research writing? **YES.**
- For Aristotle, **enthymeme** is what has the function of a proof or demonstration in the domain of public speech



### GOOD WRITING AIMS FOR...

- Efficiency in the process of writing – less time and **effort wasted!**
- Credibility through **honest and believable** handling of content
- Clarity in the expression – often referred to as **readability** (or 'low fog index')
- Opportunity to make oneself heard and thus **have an impact**

**Efficiency, credibility, clarity and opportunity all amount to communicating effectively through the written word**

## QUOTE

What sets a first-rate scientific article apart from the thousands of forgettable publications that appear in the literature every year? For a very few, content alone ensures that the paper will be widely cited. But for most, it is the way the article is written. A good article puts us in touch with a good mind (or team of good minds) at work, whose quality is revealed by clarity, economy, order, and perhaps wit.

<http://rmp.aps.org/files/rmpguapa.pdf>

## WRITING ATTITUDE

- It's a **messy process**: learn to live with it!
  - **Confusion** and emotional blockage
  - Mixing up the **big picture** and the **small details**
  - Being **disorganised** – physically and mentally
  - Indulging in **avoidance behaviour**
  - **Writer's cramp**: fear of the supervisor/editor
- These are just some of the attitude difficulties!*

## ASK YOURSELF

- Do I write to communicate? – ie to **express** rather than **impress!**
- Does my writing run away with me? – ie do I **get lost or fixated** in the process?
- What is my attitude to writing? – ie do I **avoid** it, **hate** it, **love** it or use it for **ego** trips?
- Finally what tools and techniques do I really make use of? – ie am I **efficient?**

## WHAT IT ALL LEADS TO

- Seek **efficiency** through writing strategies, tools and techniques
- **Match** the non-linear mind to the linear format of text
- Realise that it takes **discipline** and order
- But **your mind** will naturally solve writing problems – if you let it!



## DEFINE THE PROBLEMS

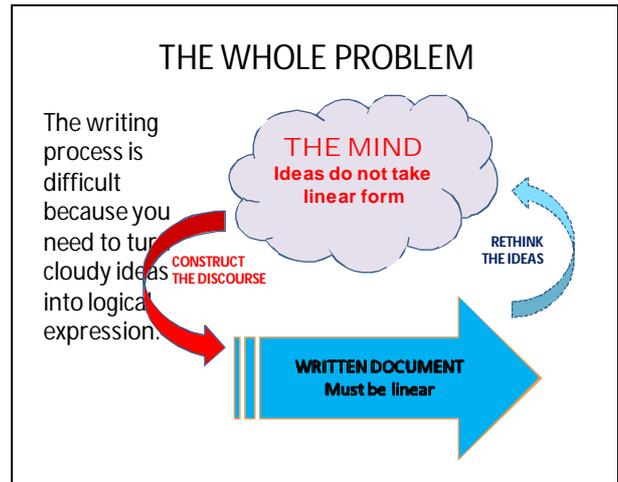
- Do you have **focus question** and sub questions?
- Do you know **What belongs where?**
- Do you know **How to store** and access research?
- Do you know **How to extract meaning** from raw data?
- Are you able to write **summaries and precis?**
- Can you **Construct well formed sentences, paragraphs, sections and chapters?**
- Are you able to **avoid stylistic fixation?**

## COMMUNICATE & BRAINSTORM



You write to communicate, so start with your colleagues. Involve them in discussions about your aims, methods, discoveries and interpretations. They will ask the questions that matter and guide your thinking!

# FUNDAMENTAL METHOD



## TOOLS TO AID THE BRAIN

### THE MINDMAP-TO-DATABASE-TO-MANUSCRIPT METHOD AT A GLANCE

PREWRITING	DRAFTING	REWRITING	SELF-EDITING	PRESENTING
IT'S A REPETITIVE PROCESS WHICH OVERLAPS AND RE-ITERATES				
Gather ideas & data, keep notes, organise your materials, and proceed to the first draft of the words. This method involves MIND MAPPING, use of a DATABASE, and TEXT PLAYOUT. These methods are basic to research writing success.	Re-read, revise and rewrite the draft. Apply the 3 S's – SENSE, STRUCTURE & STYLE, in that order, as principles for editing. Deal with meaning, logic and finally stylistic issues of grammar, expression and spelling etc – not the other way around!	Finally, edit, polish, proofread and correct you have a COHERENT, CONCISE and READABLE document. At every step from start to finish, involve supportive colleagues who give feedback and suggest improvements.		

## FROM IDEAS TO KEYWORDS

Learn to mind-map your thoughts so as to link them as lists of keywords and from there develop your outline!

My Project  
I. Goals  
A. Increase # of assignments  
B. Complete higher research paper  
C. Showcase "booky" process  
II. Initiatives  
A. Publishing  
1. Start blog  
2. Email Newsletter  
3. Podcast  
B. Advertising  
1. PPC  
2. CPA  
3. Sponsorships  
4. Testimonials

K.I.S.S. - KEEP IT SIMPLE, STUPID!

## MIND-MAPPING & LISTING

**Summary writing**  
The mind map shown here has converted thoughts into a list. To summarise just a part of it:

**Keywords**  
The shorter they are, the better, as each keyword stands for an idea or set of facts. A keyword is a hook to catch ideas. It can also become a filing topic. Words connect ideas by suggesting other ideas and so forming patterns. This pattern is your thinking!

## FREEMIND – MIND MAPPER

- Not fancy, and you can do the same on paper.
- <http://freemind.sourceforge.net/>
- Open-source tool. Features downloads, screen shots, license, essays, support forum and project information.
- You must first load Java.

*The most important function in mind-mapping is that it translates the "cloud" to the "linear" – and the software does this automatically.*

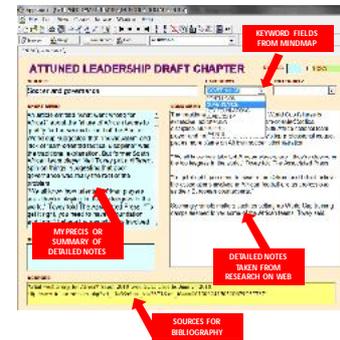
## USING A DATABASE

- ❑ A database is basically an electronic card index – but with greatly enhanced finding capabilities.
- ❑ It can be used to organise your notes, shuffle them into order, and capture lots of detail in categories.
- ❑ Your mind-map keywords can be turned into these categories and held in drop-down fields where you choose the category.
- ❑ You can capture detailed notes and summarise them on the entry card. This improves writing efficiency and prevents loss of valuable sources and insights.



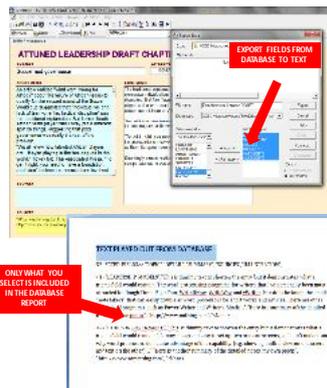
## KEYWORDS AND DATABASE

Example of a customised database that I developed for a book using old software, APPROACH. Newer software from FILEMAKER contains a “Research notes” starter pack. It keeps track of notes, documents, citations and summaries all in one record.



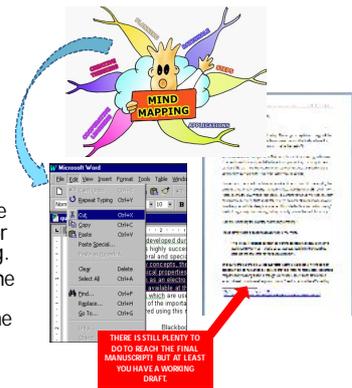
## EXPORT TEXT FROM DATABASE

With your material all collected and summarised in “cards” on the database, you sort it according to keywords and importance, then export it in your selected order. Now you have a document draft ready to be cut, revised and edited.



## CUT, PASTE, REWRITE & POLISH!

- The mindmap-to-database method has produced a raw draft.
- Now you have got an organised, detailed document to work on.
- Most inexperienced writers do not know how to reach this stage – they lack the tools for prewriting and drafting.
- This method crosses the gap between the “cloud” of ideas and the “linear” document.



## THE WRITING PROCESS

## WRITING STRATEGIES & PHASES

- 3 P's – personal discipline
  - PLANNING
  - PATIENCE
  - PERSISTENCE
- Accept disorder!
  - Eat the elephant – one bite at a time
  - Jump in anywhere to build momentum and confidence
  - Brainstorm and play with ideas
- 3 S's – writing discipline
  - SENSE (first, the meaning)
  - STRUCTURE (next, the logic)
  - STYLE (finally the flow)

### FIVE PHASES OF WRITING

1. PREWRITING
2. DRAFTING
3. REWRITING
4. SELF-EDITING
5. PRESENTATION

*The stages overlap and keep repeating themselves!*

## 3 S's – THE CORE TASKS

- **SENSE** – the message must make sense and you should be able to summarise it in a few words
- **STRUCTURE** – it must proceed logically from A-Z. Signpost it to show the way.
- **STYLE** – concise, uncluttered writing depends on sentence and paragraph structure, simple language and adequate punctuation.

One of the worst vices of writing is to tackle these steps in the wrong order – from style to sense! You CAN'T fix problems of meaning with stylistic changes! You CAN'T fix disorder in the manuscript by fiddling with vocab & grammar! If the writing seems awkward it probably has to do with sense and structure.

## WRITING TOOLS

- **Project-scheduler** software
  - Set the timeframe and state the deliverables
- **Mind-mapping programme**
  - Listing and synopsis outlining
  - Keywords and filing system
- **Database** content management
  - Storing, sorting, reorganising
  - Extracting, summarising, linking blocks of text
  - Keeping track of sources and citations
- **Intelligent word processor**
  - Proforma templates for research documents
  - Grammar/spell checker and Readability scoring

## ACTUAL COMPUTER TOOLS

*In practical writing sessions we will demonstrate and try each of these:*

- EXCEL or Google or other project schedulers
- FREEMIND software with Java
- FILEMAKER database with "Research Notes" starter pack
- MS WORD with Office templates, readability scorer



## WRITING TECHNIQUES

- Just a **few possible techniques** are shown in the next few slides.
- Writing techniques are as **varied** as the authors who use them.
- What professionals know is that you must **surprise yourself**
- Let **your intuition** get to work on writing problems
  - the mind always finds solutions!

## TECHNIQUES

- **TRY THIS:** "The main issue I need to address is..." Write for 10 minutes without stopping to correct. You may pause to think!
1. **FREEWRTING**

*Especially useful to break writer's bloc and develop insights*

    - Let it flow.
    - Do not stop to correct it. Just dash it off. The style does not matter.
    - Stop when the time is up! Jot down a few extra ideas that may have occurred to you
    - Rewrite and revise afterwards.
    - File it away. It's yours and private but you can also write an email to a friend as freewriting, and get some feedback!
    - *Review* – what did your mind tell you?

## TECHNIQUES

*TRY THIS: Use the following words in this order and without changing the words to describe the essence of your writing project! (ANY random words can make up this exercise. Get someone else to suggest the random words). You may of course stop to correct and rewrite your paragraph.*

### 2. RANDOM WRITING

*Useful to provoke you to think new thoughts and link ideas together in a colourful and interesting way.*

- moon
- dog-like
- pretence
- forward-looking
- revolution

## RANDOM WRITING SAMPLE

- I am not reaching for the moon when I argue that the dog-like devotion of some religious fanatics to "intelligent design" (the creation myth) is a mere pretence. Of course they understand that life has evolved from more primitive forms. How can they deny the evidence? Did God put it there to mislead us? I will argue that forward-looking teachers must correct the nonsense some parents teach their children or we will face a fundamentalist revolution that prevents free scientific inquiry.

## TECHNIQUES

### 3. 5 W'S & H

*Especially useful for exposition and descriptive writing.*

- WHO:** Researchers investigating the threat of asteroids
- WHERE:** at NASA's Goddard space lab
- WHEN:** reported this week the results of a two-year study
- WHAT:** showing 4700 dangerous asteroids in the vicinity of Earth
- WHY:** in order to identify asteroids that may have to be pushed off course
- HOW:** with techniques yet to be developed.

*Note that the first four questions are factual but the last two are qualitative.*

## 5W's & H - REVISION

*After rewriting, a focus sentence has been added:*

- People are becoming increasingly worried about dangers from space – particularly the threat posed by asteroids. Researchers at NASA's Goddard space centre investigating the threat of asteroids reported this week that there are 4700 dangerous asteroids that could hit the Earth. The space lab gave the results of a two-year study of the number of dangerous asteroids in the vicinity of Earth. Earth-bound asteroids may have to be pushed off course using technologies that have yet to be developed.

## CONCLUSION

## FROM PREWRITING TO PRESENTING

- This presentation has offered "brain tools" but has NOT dealt with the stylistic, grammatical, punctuation and vocabulary issues that so often feature in writing courses.
- The omission (so far!) is deliberate. You need to master prewrite and draft phases, and sort out structure, before worrying about style.
- But the full writing course goes on to deal with the elements of style, House Style, English expression, and do's and don't's of research writing.

## ABOUT THE AUTHOR

Graeme Addison is a fulltime author and practising scitech journalist. He was HoD and Professor of Communication at the University of North West, and previously Head of the Dept of Public Relations and Journalism at Technikon Natal. He is the author of *The Edge* series on the history of SA Science, Technology and Innovation; and also of two books on the world's rivers and whitewater rafting. As a Lecturer in Journalism he launched the first science writing course at Rhodes University in the 1970s. He lives in Parys, on the banks of the Vaal, and leads excursions into the Vredefort Dome. He continues to write, edit, run courses, and ghost-write books. Recent works include two books on African philosophy, ethical leadership and good governance in business.



## FOLLOW UP

- If you're interested in a writing workshop or in getting advice and support with your research writing, contact me.  
**GRAEME ADDISON**  
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**Email: [writer@wol.co.za](mailto:writer@wol.co.za)**
- Workshops can be customised to suit your discipline and held at our premises or yours.



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