Department of Teacher Education and School Research,
University of Oslo

APC seminar, UMB, Lysebu

University of Oslo, 22 June, 2011

true opinions [...]
have only
to be awakened
by questioning
to become knowledge
- *Socrates*

- ▶ raise *questions*
- ▶ draft *answers*
- ▶ review & improve

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APC Aquaculture Protein Centre
Centre of Excellence

The Five Paragraph Method

~ a tool for Academic Writing and Speaking ~

Course aim:

The main aim of this workshop will be to offer the participants tools *to exercise, to get started* and *to get on* with their academic writing. A selection of simple and common procedures will be presented, that will be highly relevant to the early stages of writing, and to support active rewriting and collaboration. It's a kind of writers gym: to get fit for writing.

With some exercise in this method you will always be able to write a couple of pages in half an hour.

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the URM of *ICMJE!*

From *International Committee of Medical Journal Editors*' "Uniform Requirements for Manuscripts Submitted to Biomedical Journals"

IV. MANUSCRIPT PREPARATION AND SUBMISSION

IV. A. Preparing a Manuscript for Submission to a Biomedical Journal

Editors and reviewers spend many hours reading manuscripts, and therefore appreciate receiving manuscripts that are easy to read and edit. Much of the information in a journal's Instructions to Authors is designed to accomplish that goal in ways that meet each journal's particular editorial needs. The following information provides guidance in preparing manuscripts for any journal.

IV. A. 1. a. General Principles

The text of observational and experimental articles is usually (but not necessarily) divided into the following sections: Introduction, Methods, Results, and Discussion. This so-called "IMRAD" structure is not an arbitrary publication format but rather a direct reflection of the process of scientific discovery. Long articles may need subheadings within some sections (especially Results and Discussion) to clarify their content. Other types of articles, such as case reports, reviews, and editorials, probably need to be formatted differently.

(lastet ned 18. april 2010 fra: *http://www.icmje.org/urm_full.pdf*)

IMRaD

~ the Scientific Article ~

This is currently the most influential format for reporting articles in scientific journals. Here it is operationalized by *questions* and brief *freewriting*:

When done with a project, you'll easily answer me:

✓**Introduction**

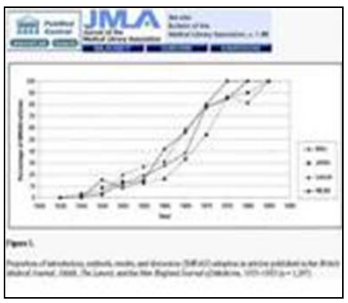
1. What did you do?

✓**Materials and Methods**

2. What did you use, and how?

✓**Results**

3. What happened?



... and ...

✓**Discussion**

4. What does the result mean?

5. What have others said?

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The growth of IMRaD

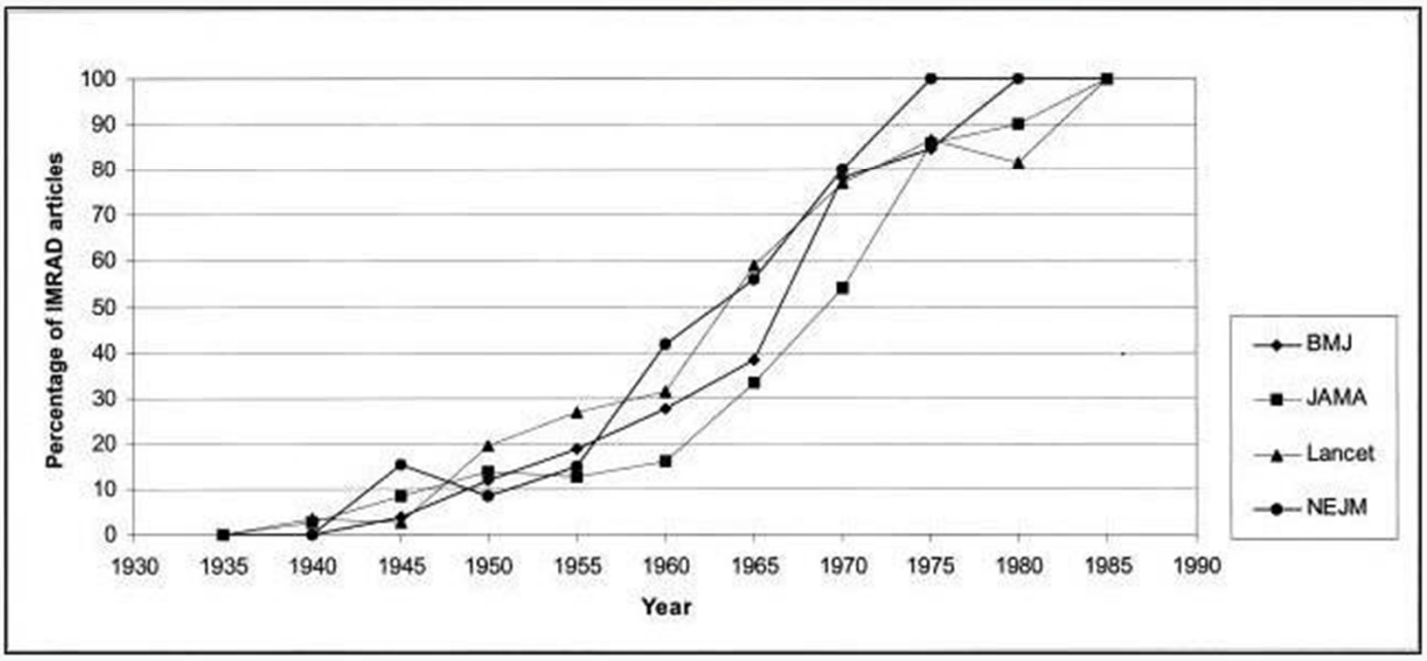

Figure 1.

Proportion of introduction, methods, results, and discussion (IMRAD) adoption in articles published in the *British Medical Journal*, *JAMA*, *The Lancet*, and the *New England Journal of Medicine*, 1935–1985 (n = 1,297)

http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=442179

The five paragraph sketch

~ to write the next first draft ~

In half an hour or so you will produce 1-2 typed pages – even on a rainy day. And that's a start:

- ✓ Write five sentences;

1 *first*: one to state the issue.

2, 3, 4 *then*: make three more, with points to develop the first; each point one sentence.

5 *and finally*: close it all off with a sentence, to get a responsible grip at the end.

- ✓ And then you expand these sentences into paragraphs, by explaining each sentence.

= a five paragraph sketch, with

a beginning – a middle – and an end

Presentation (Ethos)	*Body* (Logos)	*Conclusion* (Pathos)
Prove you are considerate!	Prove you are sensible!	Prove you are responsible!

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= the five paragraph method =

*I **know** something you can do,*
and from now on, you know too:

1. You can:
   a. write 5 minutes at full force, on any topic; no excuses - no regrets; you can ***freewrite***
   b. articulate a ***topic sentence***
   c. turn any phrase into a ***Question***
2. You can: for any topic
   a. name the topic
   b. make 1-2-3 points to develop the topic (1. first; 2. second; 3. last, but not least)
   c. Conclude or summarize
3. You can: give and receive review

Let this serve as your base & point of departure.
Now you just need to *exercise*, so you get to know what you can achieve.

exercise** still is the way to **mastery

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Get on writing

~ a dialectical method ~

Freewriting and idea forming – in 7 steps:

1. Freewriting
2. Topic sentence (the main aim)
3. The Question
4. Alternative questions
5. Review and evaluate
6. Choose
7. Explain

Each step in this exercise set is an independent *turn;* a minor writing strategy – so the entire set is a kind of collapsible pocket tool.

… and then …

just do it: articulating a main question / problem statement is done in 7 minutes

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Response responsibilities

first ✚ aid: tutorial peer review

Two ***rules of thumb,*** when giving constructive comments (e.g. to develop a first draft):

1. Learn to ***notice what is achieved***

2. Learn to ***make good guiding questions***

✓ NB!

When giving response:

- ✓ avoid giving ***too much*** response
- ✓ avoid ***empty praise, bragging*** and ***pedantry***

When receiving response:

- ✓ ***do not reply***, but
- ✓ ***take notes***

✓ NB!! Cooperation should be established early

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… a bit about peer review …

from *sense about science*

A SHORT EXPLANATION OF PEER REVIEW

When a researcher, or team of researchers, finishes a stage of work, they usually write a paper presenting their ***methods, findings*** *and* ***conclusions***. They then send the paper to a scientific journal to be considered for publication.

If the journal's editor thinks it is suitable for their journal they send the paper to other scientists who research and publish in the same field asking them to:

• Comment on its ***validity*** – are the research results credible; are the design and methodology appropriate?

• Judge the ***significance*** **-** is it an important finding?

• Determine its ***originality*** **-** are the results new? Does the paper refer properly to work done by others?

• Give an opinion as to whether the paper should be ***published, improved*** or ***rejected*** (usually to be submitted elsewhere).

This process is called ***peer review***. The scientists (*peers*) assessing the papers are called referees or reviewers.

[emphasis added]

(http://www.senseaboutscience.org.uk/pdf/ShortPeerReviewGuide.pdf)

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Five-to-get-going sketch

~ the Project Note ~

1. *What is the **field** you will explore?*

Presentation (brief)

2. *What is your **main question**, and why?*

Problem statement

3. *Which **means of proof** do you need?*

Material

4. *How do you want to **make use of** them?*

Method

5. *What do you hope to **achieve**?*

Conclusion (brief)

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Five-to-go-on sketch

~ the Progress Report ~

1. *What project are you working on, and how did it come about?*

2. *What has happened up to now?*

3. *What is most important just now? (your most recent efforts)*

4. *What do you think will happen next? (next major challenge / obstacle)*

5. *… and what do you hope to achieve?*

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What did you learn?

- ✓ ½ - 3 minutes oral comment?
- ✓ 3 - 15 minutes oral presentation?
- ✓ 1,5 - 2 typed pages in 30-45 minutes?
- ✓ 30 - 45 minutes oral lecture / presentation?
- ✓ 8 - 10 typed pages on a rainy day?!? ***NO!#¤!!***
- ✓ Tools to write, to collaborate and to organize?

The five paragraph method works, and I think that is mainly because it is manageable: it *fits the human attention capacity*. (Short term memory can handle 7+/-2 units. So we will always find recipes with 5 or fewer units more manageable.) In addition the method *fits the human attention span*. And (last, but not least,) most instrumental text models will quite easily be adapted to the method.

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Put it all together:

- *writing a Research Article in 40 STEPS!*

MAKE DRAFT

STEP 1 Draft a working **title**
STEP 2 Introduce the **topic** and define terminology
STEP 3 Emphasize why the topic is important
STEP 4 Relate to **current knowledge**: what's already been done
STEP 5 Indicate the **gap**: what needs to be done?
STEP 6 Pose research **questions**
STEP 7 State your overall purpose and **objectives**
STEP 8 List methodological **steps**
STEP 9 Explain the **theory** behind the methodology used
STEP 10 Describe the **experimental set-up**
STEP 11 Describe the technical details
STEP 12 Provide summary **results**
STEP 13 Compare different results
STEP 14 Focus on main **discoveries**
STEP 15 Answer the research question (**conclusions**)
STEP 16 Support and defend **answers**
STEP 17 Explain conflicting results, unexpected findings and **discrepancies** with other research
STEP 18 State the **limitations** of the study
STEP 19 State the **importance** of your findings
STEP 20 Establish **newness**
STEP 21 Announce **further research**
STEP 22 ABSTRACT: what was done, what was found and what the main conclusions are

NB! checklist

REVISE

STEP 23 Is the title clear and does it reflect the content and main findings?
STEP 24 Are key terms clear and familiar?
STEP 25 Are the objectives clear and relevant to the audience?
STEP 26 Are all variables, techniques and materials listed, explained and linked to existing knowledge - are the results reproducible?
STEP 27 Are all results and comparisons relevant to the stated objectives?
STEP 28 Are some statements and findings repeated in the text, tables of figures?
STEP 29 Do the main conclusions reflect the questions posed?
STEP 30 Will the main findings be acceptable to the scientific community?
STEP 31 Is the text coherent, clear and focused on a specific problem/topic?
STEP 32 Does the abstract make sense standalone (does it reflect the main story)?

POLISH

STEP 33 Are tenses used appropriately (including the active and passive voice)?
STEP 34 Are all equations mathematically correct and explained in the text?
STEP 35 Are all abbreviations explained?
STEP 36 Reconsider (avoid) using words such as "very", "better", "may", "appears", "more", "convinced", "perfect", "impression" in the text.
STEP 37 Are all abbreviations, measurement units, variables and techniques internationally recognized (IS)?
STEP 38 Are all figures/tables relevant and of good quality?
STEP 39 Are all figures, tables and equations listed and mentioned in the text?
STEP 40 Are all references relevant, up to date and accessible?

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to serve enlightenment

Why do we need argumentation and discussion?

1. ***To avoid bloodshed*** [democracy]
   exercising our conflicts with words

2. ***To develop consensus*** [e. g. parliamentarism]
   (common ground in *questions of contention*)

3. ***To educate citizens*** [school]
   able to present their own case

4. ***To remove doubt*** [academia/science]
   (safer ground in *questions of doubt*)

5. ***To illuminate the issue*** [civic discourse]
   - for the common good

And then a fundamental democratic competence emerge: to accept both counterarguments and defeat with dignity

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