# FINAL YEAR REPORT GUIDELINES . . . WRITE-UP OR WRITE-OFF?

This is entirely unofficial - has no departmental or other approval, and grew out of a fast (<30 mins.) attempt at giving some sort of general guidelines - use your discretion and initiative! Comments to j.doherty@cs.ucc.ie

## 1 Approach.

Basically you're telling a story - but in an impersonal factual manner. e.g. replace 'I saw / did.' with 'it was observed / implemented 'etc.

### What's the goal?
- merely grades, self-education & future reference, presentation for a job.
Write with this in mind and remember the poor sucker who has to read it.

### What is your major theme?
Stick to the main theme at all times; the relevance of any major digression, subordinate or parallel themes should be stated clearly at the beginning and end of appropriate sections.  Otherwise the reader might think it's like orienteering in a bad fog at night without a compass!  Remember the worst case scenario: some tired reader has to slog through yet another page of yet another report, wondering where you're taking him, what you're trying to say and why - make it easy for him - tell him!  What might be obvious in your labrynthine mind after immersing youself in this for weeks might be a dark mystery to him - but don't overkill with structure or repetition either!

Select material to support the main theme but don't ignore contradictory material; deal with the opposition in a relevant and convincing way.  Ideally one should be in a position to say why your approach is better, but at least you should state why it is more interesting, worthy of investigation, and in extremis why it didn't work at all or as well as you expected - operational constraints - e.g. time, need to complete etc.

**'I wish I'd thought of that - earlier!'** Write some notes - even at a very early stage for these reasons:-

1) you might forget in the panic of a last minute write-up - why you originally decided on a course of action

2) writing (like hanging!) wonderfully concentrates the mind - so you might get a gem of an idea - and the sooner the better - especially if you are a one man band - with no other heads to bounce ideas off.

3) thinking while writing also shows flaws in your logic - so you have time to think of good reasons to patch your holes!

Whether you get a great idea or discover a major flaw - you have some options:-

a) - ignore it - and hope that nobody will notice - generally not a good idea unless pointing it out will really add to the confusion and undermine you - (an ounce of error saves a ton of explanation - unless it's spotted!) - better relegate it entirely to an appendix or footnote, if inclusion in the body of text would only confuse!

b) - deal with it - if it's rather relevant and obvious, then you'd better deal with it - otherwise the reader might think you're a dummy not to have thought of it wonder why you hadn't dealt with it;

c) better still - try to avoid it happening in the first place - write early, write often; - attempting to write from early on may crystallise such ideas while there is yet time to investigate them;
or if too late when you realised:-

- analyse it and justify why it might not really be such a good idea;

- relegate it to future work and state with hindsight why it might be a good idea.

## 2 Style.

Be:-

**clear**-
- Use headings and sections - gives structure - especially in table of contents - reader can tell at a glance where he's at & where he's going!

- Use diagrams - if relevant, a picture is worth a thousand words, and reader can see clearly at a glance the overall structure and interrelationships.  Also breaks up monotonous text and gives reader a break.

**concise** - be ruthless - ask yourself, would it make any difference to the impact/effect if this word/phrase/sentence/section were missing.

Remember you're telling a story - so the end should match the beginning!  So after writing you will know better where you've ended up and the main conclusions will be clearer so modify/rewrite/even defer writing the introduction until after conclusion.

It is commonly thought that first impressions are lasting, but it has been discovered by psychological/sociological tests associated with advertising that last impressions are more lasting  First impressions are merely to stimulate interest - last impressions should be memorable - a lasting impression - perhaps thats why it's called the 'punch line' in ads & jokes!

## 3. General Outline and Structure.

Here is a typical general chapter structure adopted in scientific reports. Some of the chapters may be subdivided, e.g. 3,4 or 5 depending on the bias of the work towards any of these headings. The titles 'Background' and 'your approach' will be replaced with the appropriate names of the topic you are studying; or if your work is an implementation rather than theory/research, then you basically substitute with 'available tools / implementations' and then 'your design' stating the expected benefits.

**Title Page** - clear descriptive title.

**Abstract Page -** a few paragraphs at most, describing concisely the study, work and conclusions, highlighting the main developments - some insist abstract and intro should be written last when you know the story!

**Contents** -

## 1. Introduction - set the scene - paint a picture - basically why and how?.

**Why?**
Importance, relevance and interest to (the most important & relevant of):-
 - humanity, science, computer science, department, yourself.

**How?**
 - this part of the introduction should be brief (< 1 page) - only give onlya a general outline of approach to give direction to the thesis and whet the reader's appetite - don't write the entire thesis in the intro - else it's finished

## 2 Background what's already known or done - to show you know what you're talking about & went to the bother of finding out.

Approaches taken by others ranging from the general area to the specific application or implementation. This should lead towards the natural conclusion that your's was a valid & worthy attempt.

## 3 Your approach:

In addition to explaining your approach you should also attempt to justify why it is better or more appropriate or interesting or worth investigating.

## 4. Implemetation.

Why, when and how? Excessive reporting of project management charts should be condensed, dumped to an appendix, or preferably omitted, unless one is concentrating on them as an specific area of study.

## 5 Results and analysis.

And don't be afraid to say why it didn't work or what the obvious weaknesses are - if you don't the reader might assume you didn't spot the obvious or haven't got a full understanding of the area. Of course, he might just be looking for answers too! Whatever the reason, it is good to do a thorough analysis of the negative as well as the positive - it shows a mature, comprehensive and realistic approach when you appreciate the weaknesses as well as the strenghts of the work - it shows you have both depth and width to your knowledge - the reader may even consider you an expert since it seems that you can even speculate!

## 6. Conclusions and future work - all the things that with hindsight you'd love to have done but didn't.

## 7. Appendices - any boringly detailed relevant sections not essential to the main theme put here for reference - eg. code, proofs - unless a core part of the main theme.

## 8. Bibliography - list of references to others' work used or referred to in report.

## General Conclusion & Writing Style - Be Clear & Tie yourself down.

1)     First state <u>what</u> - so the reader knows what you're trying to do
         then state <u>why</u> - he should be interested by now - if you've presented <u>what</u> you are doing well
         then state <u>how</u> - he ought to want to know at this stage - if you've made a good case for <u>why</u> it is done

2)     Use headings, sections, sub-sections, paragraphs and fairly short sentences.
         Avoid long meandering sentences with meaningless conjunctive clauses.

3)     Avoid unecessary waffle - ask yourself what you're trying to say? (Would you say this to a group?)
         Stick to the theme or sub-theme within the section - if not possible - new section.

4)     Avoid repetition of the trivial - but not by constant footnote references or other interrupts / distractions.
         Try to restate topic with sufficient info for the occasion or reference fuller discussion within report or
         literature 'as discussed in section ?? on this and that
         - but too much - and its too frustrating having to cross-reference always - use a footnote / appendix ?!

5)     Use :-   • common sense in expression,                    • references to standard works;
                     • graphics, charts etc rather than tables,          • equations if relevant to tie it down,
                                                 • and finish with a bang!

## N.B.  Typographical Spacing Conventions.
 - no space between all punctuation marks and previous words, unless a hyphen used as a pause or header;
 - single space between words, and after all punctuation marks except full-stop, which is followed by 2 spaces.