



COMPI205

Technical Report –Dr. Su White

Typical mistakes from previous students

General Rules

- Before any hand-in you should have made sure you
 - address all of the assessment criteria
- Writing is a craft
 - a good document will go through more than one revision
 - There is never a perfect solution to a written problem

Assessment criteria mistakes

Students often

- Fail to do one of the things you get marks for
 - Appear to give more importance to some criteria than others
- Possible reasons?
 - Rushed last minute?
 - Lack of focus?
 - Blink panic?
 - No review of text

Last minute solution?

- Use your time strategically
 - What changes will get you more marks?
 - Look at the assessment criteria carefully
 - <http://edshare.soton.ac.uk/19129/18/COMPI205%20Technical%20report%20spec%20and%200criteria%20combined.pdf>

Review each assessment criteria

- Objectively analyse your likely score
- Or work out how to get some help with that task...
- Decide how you might change the work
- Evaluate how long that would take (how much effort)
- Review the total set of possible changes
- Make the most impactful effort
- **NEVER THROW AWAY EASY MARKS**



A new year's quiz

- What do students do wrong?

Abstract

- **Quality of the abstract**
- The abstract should tell me why I need to read this, what I will learn and tell me the important conclusion It must be stand-alone.

Introduction

- **Quality of introduction:**
- tells me what the question is, what is the state of the art is in the area and should reference current literature.
- Think scope and scale

Argument

- **Quality and clarity of argument /enjoyability**
- Narrative/story that ties the report together making even complex topics easier to understand.

overall analysis and conclusions

- **Quality of overall analysis and conclusions**
- Summarizes and analyzes what has been learned in order to synthesize and address answers to the questions asked in the introduction.
- Discuss limitations of report /possibly suggesting further work.

Literature

- **Quality of cited literature**
- Ideally peer-reviewed, appropriately up-to- date.
- Footnotes for refs. to material which might change e.g. websites.

Structure and appearance

- **Structure and appearance of report**
- Excellent appearance. Strong structure of main sections, well laid out. Clear structured and logical. Good/relevant diagrams/illustrations.

Readability

- **Readability** how easy is it to read and understand this report

References

- **References:**
- Correct using of citations/references/Bibliography. Adheres to Harvard convention (Name, Date)



Academic Integrity

- **Quality of academic integrity/originality**

Things you must do

- Include the academic integrity statement
- Include the summary of your brief
- These go between the title page and the abstract
- Best start the abstract on a new page – we have a word limit not a page limit



Academic Integrity Statement

- Include on the page after your title page

Acknowledgements

- Don't include unless you have something to acknowledge

Word Limit

- Do not exceed the word limit
- You will have to trim what you have written
 - This means you have to have a fair draft well before the actual deadline!
 - A second pair of eyes can help you find ways to shorten and ways to clarify
- Friends or peers are good make good proof readers
- You can learn how to write better by reading other people's work
- Sometimes a good diagram can save you lots of words
 - Use a diagram to
 - summarise a set of relationships
 - Provide some insights

Reminders

- This material was in previous lectures

We have had the theory...

Lets imagine the process 😊

Electronics and
Computer Science


UNIVERSITY OF
Southampton

Technical writing

Lectures 9-10, 26.10.2015

Elena Simperl

Professional Development (COMP1205)



<http://www.edshare.soton.ac.uk/15350/>

Electronics and
Computer Science


UNIVERSITY OF
Southampton

Reproduction literacy & academic integrity

Lectures 5-6, 12.10.2015

Elena Simperl

Professional Development (COMP1205)



<http://www.edshare.soton.ac.uk/15127/>

What do you want to learn today?

Think about how you write:

- What can you already do well which will be useful?
- Where are your weaknesses?

Based on this reflection



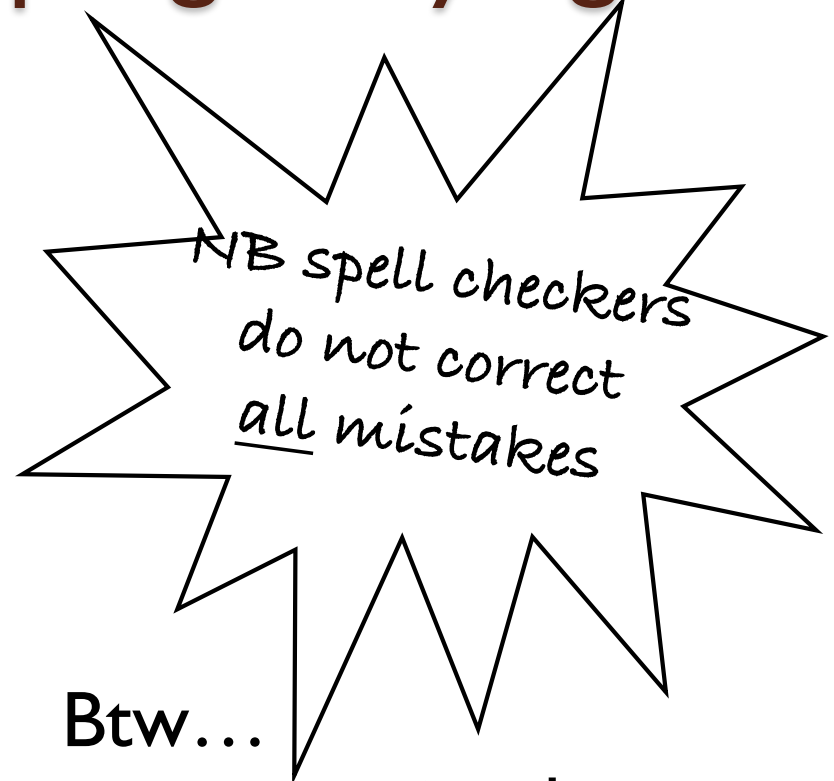
write down **three** things you would like to get out of the session today

You need to learn how to...

- Organise writing clearly and logically
- Handle evidence appropriately in writing to present a structured and logical argument
- Explain concepts in formal context
- Structure your work for correctly for the appropriate audience
- Understand strategies for revision at the document, paragraph and sentence levels
- Understand grammatical and stylistic usage
- Be able to edit and refine your own written work

Sum wonderful peeeple gt evrytng write 1st thyme

- This information/class is not for you!!
- But you may be able to help your friends and colleagues
- You may learn from helping them



Btw...
can you write down
the correct version of
my heading?



Think about the process and purpose of writing

Two minutes:

What is the purpose of

- writing the technical report
 - in this module
- writing reports
 - as part of your degree
- writing
 - in a professional context

Includes:

- Learning how to write (and practicing)
- Recording a process for 'reproduction'
- Demonstrating knowledge, skills and understanding
- Communicating scientific or technical findings/discoveries/insights

Look at the technical report spec'

COMP1205 Technical Report - specification

Rationale

Reports are one of the most common and important technical documents in the workplace. Reports provide information and recommendations in order to help organizations solve problems or achieve goals. A well-designed and written technical report is informative and persuasive, often to multiple audiences.

Assignment

You will each be individually allocated a specific scenario from the set below on which to write a 2002 word technical report.

Read the brief carefully to understand the extent of the brief. Make a note of all the requirements. Before you hand in your work, double check you have addressed all the requirements: brief; formatting; academic integrity; references/citations.

Topics:

Anonymity, Privacy and Security

1. Your boss has been looking at guidance from the British Standards Institute which provides guidance on good practice to ensure compliance with the Data Protection Act. As a consequence they have become interested in security issues, particularly in relation to anonymity of communications on the internet. They have asked you to find out for them how you can achieve anonymity in communications on the internet. How would it be useful to the company? Could it be a way of securing more private communications, or could it be a device to which supports industrial espionage and other abuse of the company computing resources by dishonest employees? They ask

<http://www.edshare.soton.ac.uk/14582/>

COMP1205_Technical_Report_Specification.pdf
PDF

Download

Dr Su White saw@ecs.soton.ac.uk

COMPI205

<http://www.edshare.soton.ac.uk/15567/>

Look at the mark scheme

Technical Report Marking Scheme						
	A 1st	B 2:1	C 2:2	D 3rd	Fail	MARK
Structure and appearance of report what the report looks like conforms to expectations/specifications	Excellent clear presentation. Strong structure of main sections, well laid-out. Clear structured and logical. Good diagrams/illustrations.	Good presentation. Clear layout, some diagrams, adequately annotated, addresses topic in a logical/structured manner.	Acceptable presentation. Main sections have some structure. Could do better diagrams. Not used template properly.	Disorganised presentation. Un satisfactory structure. Poor labeling of or no diagrams. Overall looks structure.	Poor presentation. No obvious structure, difficult to work out what is where. Failed to use template.	10%
50%	7-10	6-7	5-6	4-5	3-5	
Readability how easy it is to read and understand this report	Meaning clear and fluent, originality in expression, logical progression and perfect English.	Meaning clear and logical Good English.	Meaning and text quite clear, Some faults in English.	Meaning and text fairly not always clear and does not always make the point. Poor English in some places.	It was difficult to read this - perhaps because it was lacking in logical progression or the English was seriously bad.	10%
50%	7-10	6-7	5-6	4-5	3-5	
Quality of the abstract The abstract should tell me why I need to read this, what I will learn and tell me the important conclusion it must be stand-alone.	Well-written Abstract. After reading this I am quite clear why I need to read the report, what I am going to find out in the report and what the important conclusion will be. No citations in the abstract.	Good Abstract. After reading this I am really clear why I need to read the report, what I am going to find out in the report and what the important conclusion will be. No citations in the abstract.	Fair abstract, although after reading it I am not fully clear why I need to read the report, what I am going to find out in the report and what the important conclusion will be. The abstract is not stand-alone (eg has citations).	An attempt at an Abstract. Fails to make it clear why I need to read the report, what I am going to find out in the report and what the important conclusion will be. May not be stand-alone - maybe too long or too short.	After reading this I am little the wiser than I was from reading the title of the report. Maybe much too long or much too short.	10%
50%	7-10	6-7	5-6	4-5	3-5	
Quality of Introduction tells me what the question is, what is the state of the art in the area and should reference current literature.	Good introduction, covers questions raised in the set topic. Interesting/comprehensive background and state of the art, demonstrating background reading/research.	Appropriate introduction, with fair explanation of questions the report will answer. Good coverage of state of the art and background information on the topic.	Adequate introduction, although not quite clear what question report will answer. Adequate coverage of background information.	Some attempt at an introduction; background information and relevance for the topic of the project, but not in an appropriate level.	Inadequate introduction, little if any evidence of background reading.	10%
50%	7-10	6-7	5-6	4-5	3-5	
Quality and clarity of argument enjoyability good non-convoluted that ties the report together making even complex topics easier to understand.	Discussion shows depth of analysis, explanation and synthesis of information, not superficial reporting of facts.	Good narrative and discussion with some analysis and synthesis.	Discussion demonstrates basic understanding, but limited to a factual account only, with little discussion or analysis.	Superficial reporting, no demonstration of in-depth understanding of topic.	Lack of evidence that student has understood the information, with a tendency to regurgitate facts. Poor discussion.	10%
50%	7-10	6-7	5-6	4-5	3-5	
Quality of overall analysis and conclusions summarises analyses what has been learned in order to synthesise and address answers to the questions asked in the introduction, discuss limitations of report (possibly suggest further work).	Conclusion shows good integrations of introduction and discussions, introduces issues for further exploration. Shows awareness of limitations of report.	Relevant issues and problems identified and discussed with some analysis good summary or lessons learned. Good conclusion demonstrates authority. Possibly over confident in answer.	Some relevant issues are identified and discussed, shows comprehension, no significant errors or omissions, some conclusions drawn. Conclusion does not raise issues for further exploration.	Superficial relevance and limited comprehension, error in judgments and misleading summary. Weak conclusion.	No more than a summary of what has already been said.	10%
50%	7-10	6-7	5-6	4-5	3-5	
Quality of cited literature ideally peer-reviewed, appropriately up-to-date, references to material which	Wide range of recent sources of literature listed using primary literature mostly from credible peer reviewed	Good range of recent literature and sources - the majority from peer reviewed and primary sources	Fair number of references although they are mostly not primary sources or peer reviewed	Few sources referenced, only basic texts on a restricted range of subjects. Many are not from peer-reviewed	Limited referencing. The few that are there are simply websites and secondary sources.	

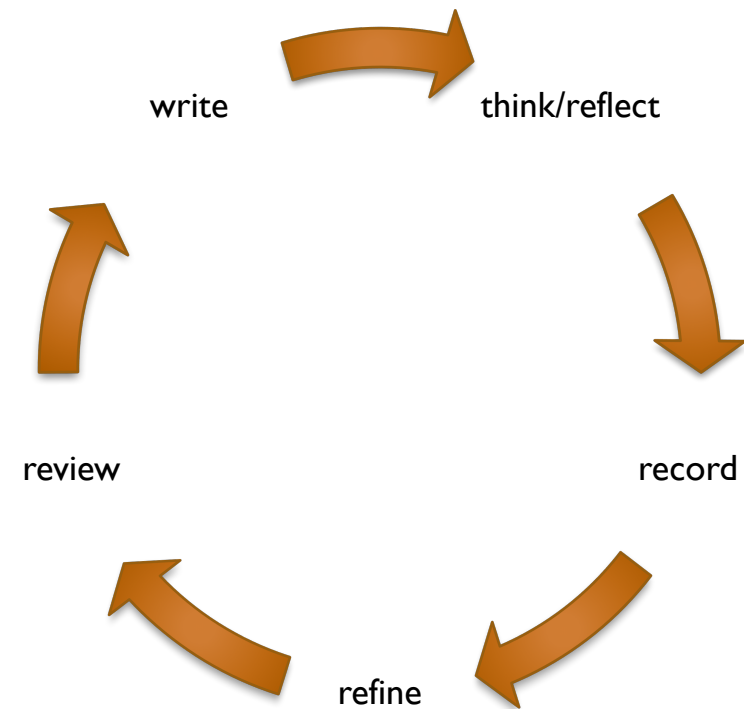
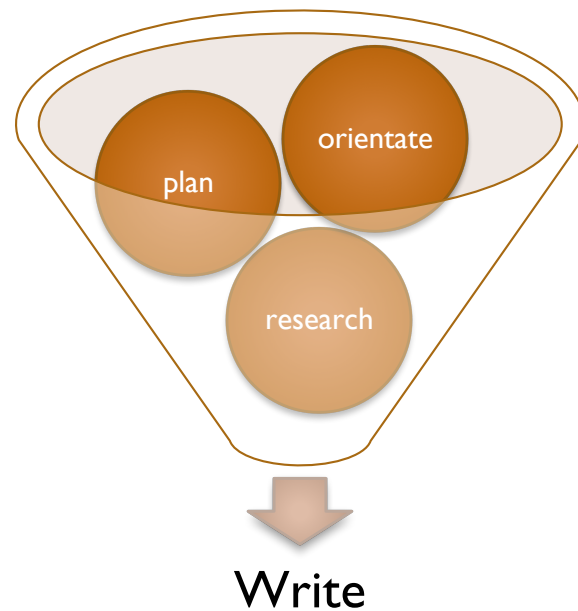
<http://www.edshare.soton.ac.uk/15362/>

Dr Su White saw@ecs.soton.ac.uk

COMPI205

<http://www.edshare.soton.ac.uk/15567/>

The process – and pragmatics



Your first draft will never be good enough to hand in!

Always hand in before the deadline

Before Getting Started

- You wish to communicate “What you have found out”. If you didn’t find anything out : STOP!
- Usually technical reports are intended to communicate new knowledge
“I had this hypothesis and I tested it like this; here are my results and this is what we learn from them”
- BUT as a student
you are asked to write technical reports about things that you know that the person who reads it (the marker) will already know. Don’t worry – your marker is not your audience (see later) – and your task is still to express what *you* found out.



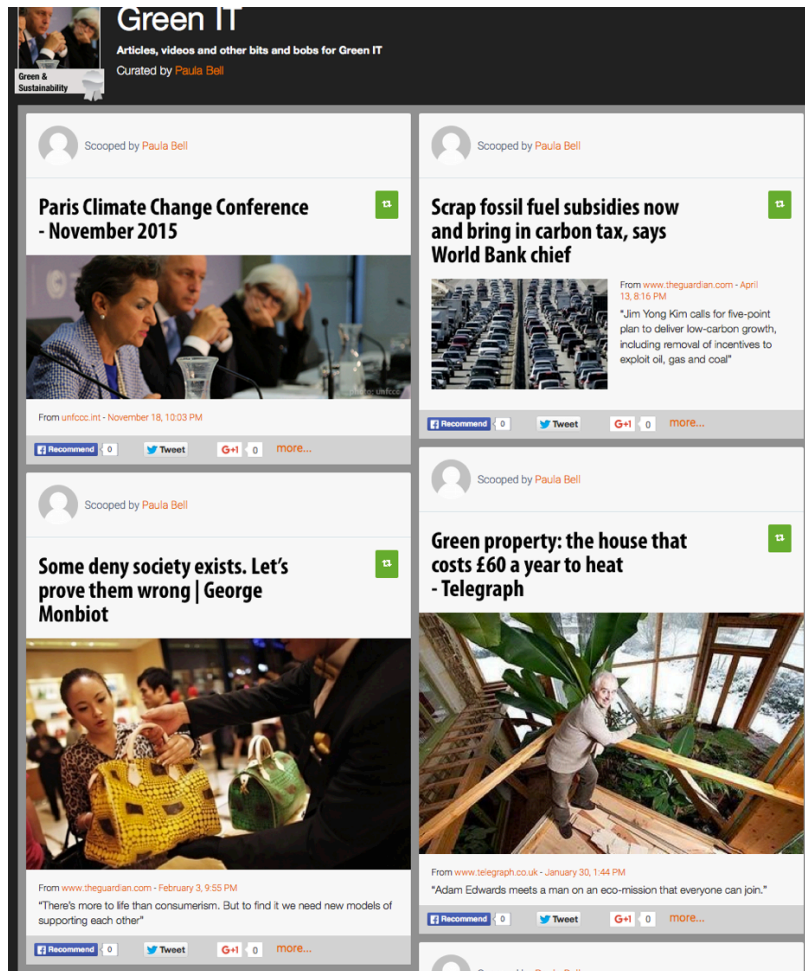
Use the process to learn about yourself

- How do you think and learn?

How can you refine what you do?:

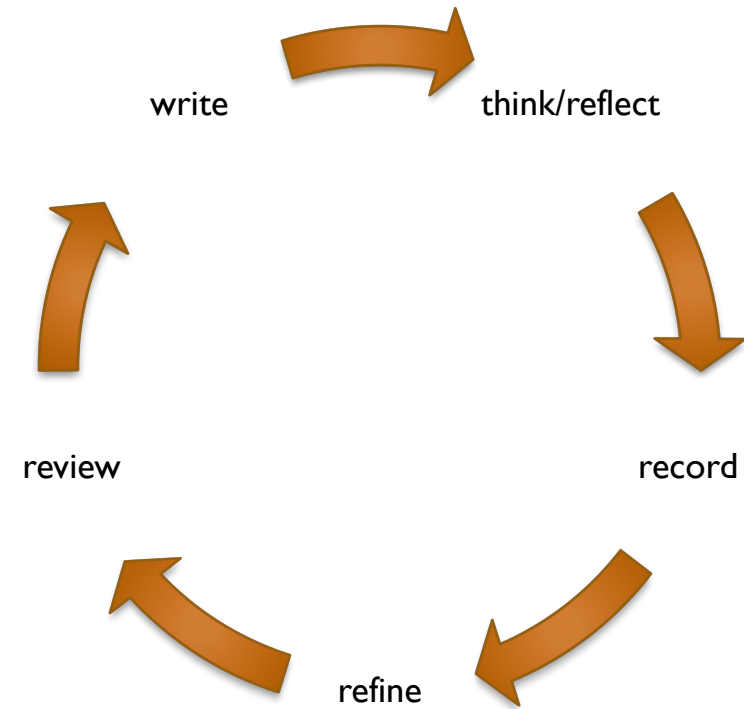
- To work **smarter** not harder

Working collaboratively can be more fun/productive...



- But write your report individually
- Find your own words
- Select your quotes – and cite them accurately

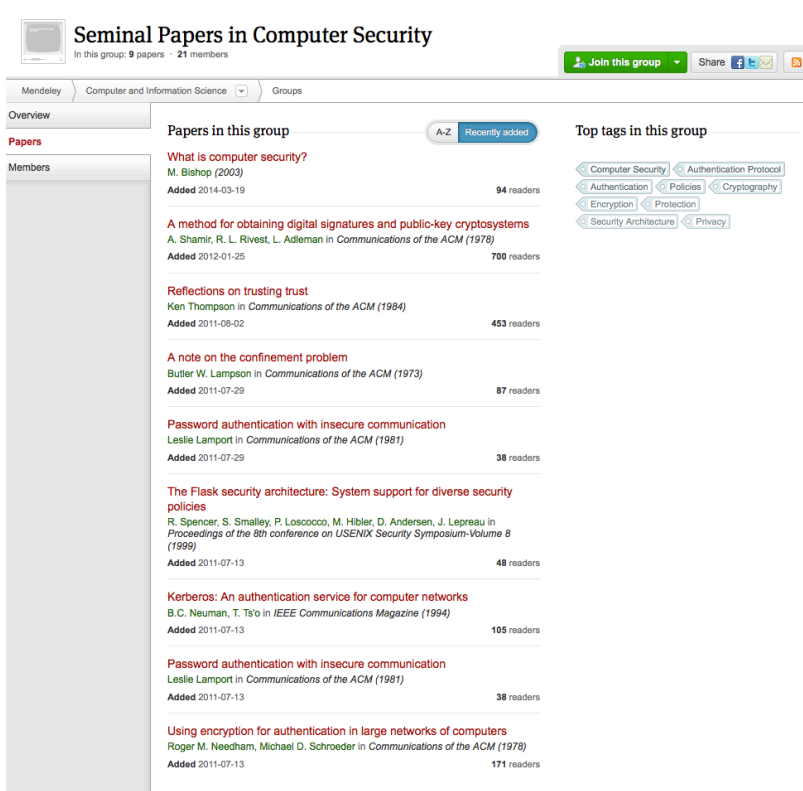
Bear in mind existing guidance



What we know about plagiarism

- People who are rushed:
 - Take shortcuts
 - May feel panicked
 - May not make good decisions
- ...how to avoid it
 - Carve our enough time
 - Add a buffer for the unexpected

Think about using writing tools



The screenshot shows a Mendeley group page for 'Seminal Papers in Computer Security'. The page lists several papers with their titles, authors, and reader counts. The papers listed are:

- What is computer security?** by M. Bishop (2003), 94 readers.
- A method for obtaining digital signatures and public-key cryptosystems** by A. Shamir, R. L. Rivest, L. Adleman in *Communications of the ACM* (1978), 700 readers.
- Reflections on trusting trust** by Ken Thompson in *Communications of the ACM* (1984), 453 readers.
- A note on the confinement problem** by Butler W. Lampson in *Communications of the ACM* (1973), 87 readers.
- Password authentication with insecure communication** by Leslie Lamport in *Communications of the ACM* (1981), 38 readers.
- The Flask security architecture: System support for diverse security policies** by R. Spencer, S. Smalley, P. Loscocco, M. Hibler, D. Andersen, J. Lepreau in *Proceedings of the 8th conference on USENIX Security Symposium-Volume 8* (1999), 48 readers.
- Kerberos: An authentication service for computer networks** by B.C. Neuman, T. Ts'o in *IEEE Communications Magazine* (1994), 105 readers.
- Password authentication with insecure communication** by Leslie Lamport in *Communications of the ACM* (1981), 38 readers.
- Using encryption for authentication in large networks of computers** by Roger M. Needham, Michael D. Schroeder in *Communications of the ACM* (1978), 171 readers.

Using Scrivener for Writing Scientific Papers

As an academic, I spend a lot of time writing. Switching to a Mac in 2008 was one of the best productivity hacks of my life. But there has always been this one nagging problem: Microsoft Word. I loathe Microsoft Word. Especially the Mac version.

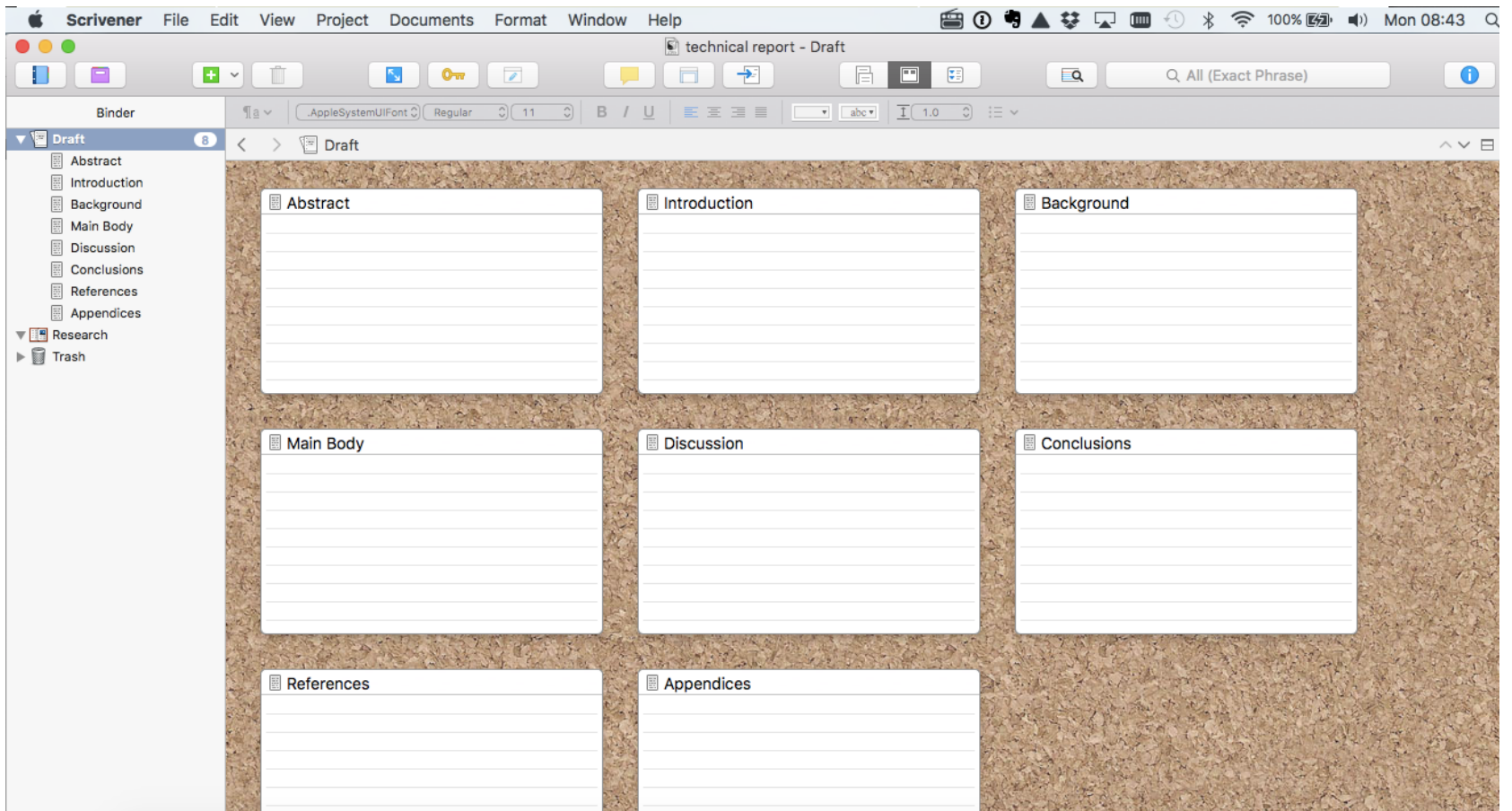
Word has many flaws, but the most irritating is its amazing ability to hang or crash. It happens all the time, but especially when exchanging documents that have "track changes" enabled with colleagues on PCs. I still remember vividly one night when I was working on a paper that Word crashed more than 30 times.

So infuriating.



Enter Scrivener

My frustration with Word drove me to experiment with many other word processors like Pages, OpenOffice, LibreOffice, and Google Docs. Although it wasn't first on my list to try, I kept hearing rave reviews of a program called Scrivener from accomplished writers like Michael Hyatt and Jeff Goins. Scrivener isn't a word processor. It's a writing studio.



Scrivener 2

for Mac OS X

10.11 El Capitan Ready

Show Windows Version

: *Free Trial*

: *Buy Now \$45* USD*

: *Upgrade from 1.0*

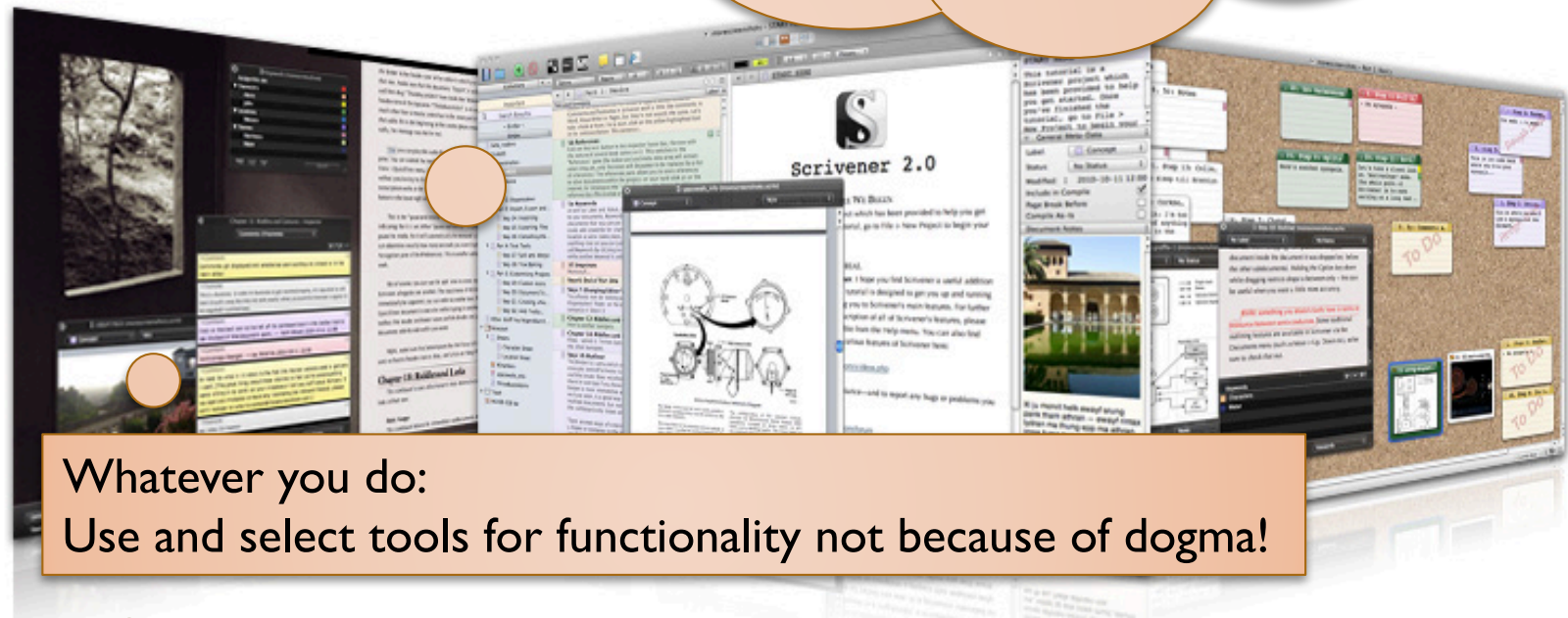
: *Download for Mac*

What is Scrivener? Features What's New





It helps me organise text
Some of the best student
work I have seen was
produced in scrivener



Whatever you do:
Use and select tools for functionality not because of dogma!

Advice includes

- Set aside time for research and writing
- challenge common assumptions
- overcome procrastination
- eliminate distractions
- use a timer
- set SMART goals
- chunk your project into small tasks
- track your progress
- make yourself accountable



Reports are not personal



One time, i thought i would write a mystery novel. In the novel, there would be a murder and all kinds of people would try to figure out who did it. At the end, you would find out that the narrator of the book did it.

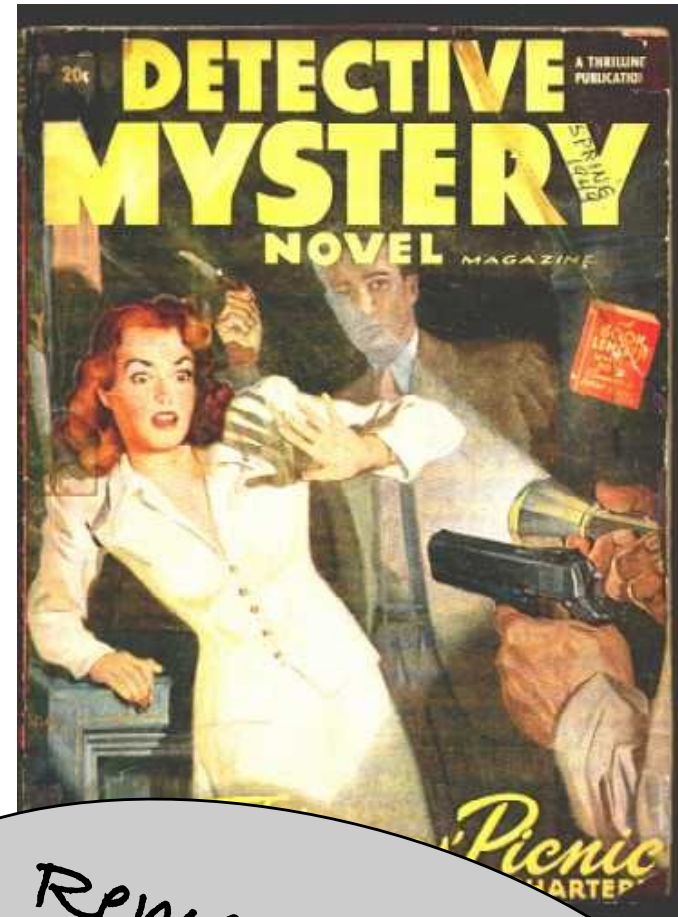
Then i figured someone probably did that already. and i remembered that i am an awful writer and i really hate mysteries.

Structure of a Technical Report

- **[Title page]**
 - name, affiliation, date, contact details, etc.
- **[Declaration]**
 - who did this work?
- **[Acknowledgement]**
 - to those who have helped or influenced your work
- **[Contents]**
 - sections, sub sections and page numbers (probably not sub sub sections)
- **Abstract**
 - stand-alone summary of report
- **Introduction**
 - provides the motivation and context and outlines other related work
- **Main technical sections**
 - theory, experimental method, results, discussion
- **Conclusions**
 - and appropriate future work
- **References**
- **[Web References]**
- **[Bibliography]**
- **[Appendices]**
 - anything which would interfere with the continuity of the main report (typically detail)

Report function

- Abstract summarises the work presented
- Introduction (provides context)
- Itemise the key work(s)
- Identify where your contribution fits
- Present key ideas, describe methods
- Present Results
- Draw Conclusions



Remember Your
report is not a
detective novel!

The Abstract

- must be stand-alone
- must not contain citations
- is a concise summary – not a précis.
- **IS VERY IMPORTANT**

Use four or five sentences.

1. What is the problem, and why is it a problem?
2. What is your idea for a suggested solution?
3. How did test your idea?
4. What results did you get?
5. Why is that useful?

It's a good idea to write the abstract before you begin (even if you re-write it after you finish)

ABSTRACT

Although the cloud of Linked Open Data has been growing continuously for several years, little is known about the particular features of linked data usage. Motivating why it is important to understand the usage of Linked Data, we describe typical linked data usage scenarios and contrast the so derived requirement with conventional server access analysis. Then, we report on usage patterns found through an in-depth analysis of access logs of four popular LOD datasets. Eventually, based on the usage patterns we found in the analysis, we propose metrics for assessing Linked Data usage from the human and the machine perspective, taking into account different agent types and resource representations.



Experimental Report Abstract

Tea drinkers report major differences in their satisfaction with cups of tea, even when they have been made from the same tea leaves.

One possible cause of this variability is the temperature of the water at the time it is poured over the tea leaves.

This report describes an experiment in which one hundred tea drinkers were asked their views on teas made with water at different temperatures.

The results demonstrate a significant preference for tea made with near boiling water.

The perceived quality of tea, particularly in the USA, would be much enhanced if caterers observed this convention.

- (5 sentences, 98 words)

Work and improve over time

- Have a plan
- Do good work
- Record your work
- Analyse the results
- Capture the whole process
- Meet your deadlines

Some aspects will apply equally to:

- Every written task

Use opportunities to refine your process

these are skills for life

Record an Audit Trail

References

- Provide an audit trail
- Acknowledge others' work
- Are concise

Should be replicable

List references

- consistently,
- correctly,
- completely

They need to be:

complete and in a standard format

They need to contain:

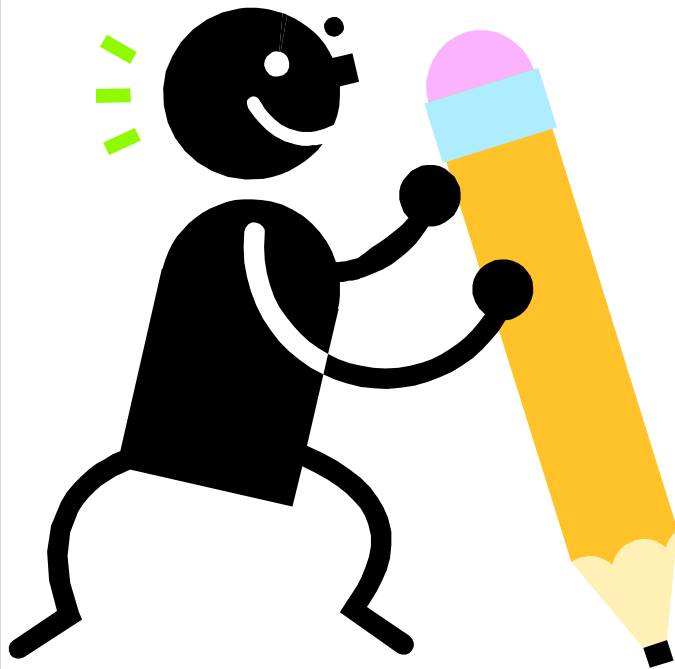
enough detail to locate the same source again

Do not include:

ISBN

Library call numbers

Work smarter not harder



One touch

- Write your bibliography as you go
- Always get full references
- Record how and when
- Collect to a standard format

Information needed

- Gather information before *and* during writing
- Begin to organise information as you obtain it
- Information from others:
record full bibliographic details
- Information you generate:
keep a complete logbook record

Keep track of your sources



Avoid plagiarism

With notes, copies of articles, useful diagrams, etc.,

NB

- Authors, complete name of work, editors if any, publisher, year/month of publication, volume no., page numbers
- URL plus any clues as to original paper source.
- If class notes, is there a printed textbook?
- If a self-contained paper, look for any and all clues to find the original citation (e.g. author's publication list on Web page).