

SMMER TRAINING REPORT

How to do it right?

By: M. H. Imam (May 22, 2016)

This presentation has:

1. Skeleton of a technical report
 - Structure or layout - main elements?
2. Contents of each element
 - What to write?
3. Figures & Tables
 - How?
4. Using MS Office
 - System of Headings - how?
 - Table of Contents - how?

Feedback request:

Please fill in the form at the following link:

 <https://goo.gl/Z6aVUV>

Feedback on summer training report presentation

Please let us know how much you understood from the presentation on summer report writing. Your feedback will help us improve such types of presentations.

* Required

Name *

Your answer

Email *

Your answer

Feedback request:

My understanding on preparing "Title Page" *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

My understanding on preparing "Table of Contents" *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

My understanding on writing an "Abstract" *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

Feedback request:

My understanding on what should be in an introduction *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

My understanding on what should NOT be in an introduction *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

My understanding on what should be written in the summer training report chapters *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

Feedback request:

My understanding on how to specify table and figures caption *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

My understanding on how to refer to figures and tables in the text *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

My understanding on using MS Word for Table of Contents *

	1	2	3	4	5	
Did not understand at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Understood very well

Technical Writing

- ❑ Successful engineers are:
 - ❖ Engaged in ***technical writing***
 - ❖ For at least 1/3 of their work time
- ❑ Examples of reports:
 - Proposals
 - Regulations
 - Manuals
 - Procedures
 - Requests
 - Technical reports
 - Progress reports
 - Emails
 - Memos
 - Training reports

Technical Report

- Technical report is also called:
 - Engineering report
- Follows a specific layout and format
- Specified by:
 - American National Standards Institute
 - (ANSI)

Structure of a Technical Report

1. Title Page
2. Abstract
3. Acknowledgment
4. Table of Contents/Figures/Tables
5. Introduction
6. Main Body of the Report
7. Conclusions and Recommendations
8. References
9. Appendices

Title Page

- Title of the report
 - Must describe the report accurately
- Names of authors
- Identification of authors
- Affiliation

Abstract or Executive Summary

- Report substitute for a busy reader
- Length (3 sentences - a full page)
 - Often 200 words.
- Sentence One: expand on the title
- Sentence Two: why the work was done
- Remainder:
 - key results
 - conclusions
 - recommendations

Acknowledgement

- Include:
 - your sponsor (University/College)
 - your advisor
 - outside sources (companies or agencies)
 - other departments on campus
 - individuals who have helped
- Be brief

Table of Contents (TOC)

TABLE OF CONTENTS

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List of Figures and Tables	iv
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3.0 Methods, Assumptions, and Procedures	4
4.0 Results and Discussion	8
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List of Figures

LIST OF FIGURES

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List of Tables

LIST OF TABLES

Table 1.	Hose Nozzle Parts List	5
Table 2.	Young's Modulus Values for Plastics	6
Table 3.	Standard O-Ring Sizes	9

Introduction

- Not a substitute for the report
- Must not echo the abstract
- Summer training reports:
 - Bad introduction is common
- Question: What should it:
 - ☐ Contain?
 - ☐ Not contain ?

Introduction - No's

- ❑ No acknowledgement, no thanks
- ❑ No results
- ❑ No technical information
- ❑ No conclusions
- ❑ No recommendations

Introduction - Its contents

1. What: This report is about what?
2. Whom: For whom it is useful?
3. Why: Why it has been written?
 - a) A requirement of summer training
 - b) Exercise on report writing
 - c) Documentation of what I learned
4. Brief background information
 - a) About the place of training
 - b) About the organization
 - c) Approach or methodology of training
5. Organization of the report

Main Body of Report

- Divide into chapters
- What to write in each chapter
- Biggest issue of summer training reports
 - Should we write about the theory?
 - Should we give textbook stuff?
 - Should we copy and paste?
 - Answer is: NO.

Main Body of Report - What to write

- Provide all information about:
 - What did you see during training
 - What did you do during training
 - What did you learn from the training
- Tell about your experiences of learning.
- Report is not about textbook topics.
- It is about your training.

Chapter Content

- Each chapter has:
 - A chapter heading
 - An introductory paragraph
 - Sections
 - (with numbered headings)
 - Subsections
 - (with numbered subheadings)
 - Concluding paragraph

Conclusions

- Must be concise
- Summary of what you learned
- Assess your learning
- Tell what you liked on the training
- Tell the difficulties you encountered
- Tell ways to improve the training

REFERENCES

References

- Various formats have been developed. Pick one you like such as the IEEE Transactions format
- Decide on a sequence, such as the order they appear in the text
- Always give full references such that others may find the item
- <http://library.canterbury.ac.nz/services/ref/asce.shtml>

References

ASCE Style: Template:

Author Surname, Author Initial.
(Year Published) . *Title*.
Publisher, City, Pages Used.

Example:

Wearstler, K., and Bogart, J.
(2004) . *Modern glamour*. Regan
Books, New York.

References (Another style)

- [1] A. Student and B. Professor, “Very Important Project,” in *Journal of Irreproducible Research*, vol. 13, no. 9, pp. 25-31, Nov. 2004.
- [2] C. Dean, *The Book of Earth-Shattering Research*, Husky Press, Storrs, CT, 2005.

References

[29] Computer & Structures Inc., “SAP2000 software package”,
<http://www.csiberkeley.com>, California, USA,
(2009).

[30] Holland, J.H., Adaptation in natural and artificial systems, University of Michigan Press, Ann Arbor, MI (1975).

HINTS & TIPS

Headings

- How to write a heading?
 - Starting letter of headings is capital
 - A, an, the, in, of , to, etc with small letter
 - 3 to 7 words
 - Not complete sentence
 - Bold with larger fonts
 - Use MS Word automatic numbering

Writing Hints

- Stay within the required page limit!
- Use a consistent format (same type)
 - Title
 - Header
 - Spacing
 - Font type
 - Size
- Put header information on all pages
- MS Word makes it all automatic

Writing Hints, continued

- Be clear; use precise language. Keep wording efficient without losing meaning. Avoid using exaggerated terms.
- **Maintain a professional tone.** Do not be emotional or use jokes.
- The finished copy should “flow” smoothly and carry the reader toward a conclusion. Avoid extremely long sentences as they may confuse the reader.

Writing Hints, continued

- Use mostly **past tense verbs**.
- Keep verb tenses in agreement within a paragraph.
- Define any **terms** that might be unfamiliar to the reader, including acronyms and symbols within equations.
- **Present facts or inferences** rather than personal feelings.

Writing Hints, continued

- Is a table and/or figure required?
 - Yes? then include them!
- Label all figures and tables.
 - Tables are captioned at the top.
 - Figures are captioned at the bottom.
- For figures embedded in a EXCEL sheet:
 - Remove the title.
 - Use title in the caption
- Refer to figures and tables in the text
 - “...as seen in Figure 1...”

Table 1: List of instruments for water tests

Instrument	Estimated Force [lbf]
Turbidity Meter	2
Portable Sampler	8
Velocity Flow Meter	7
Nutrient Meter	2
pH Electrode	0.5

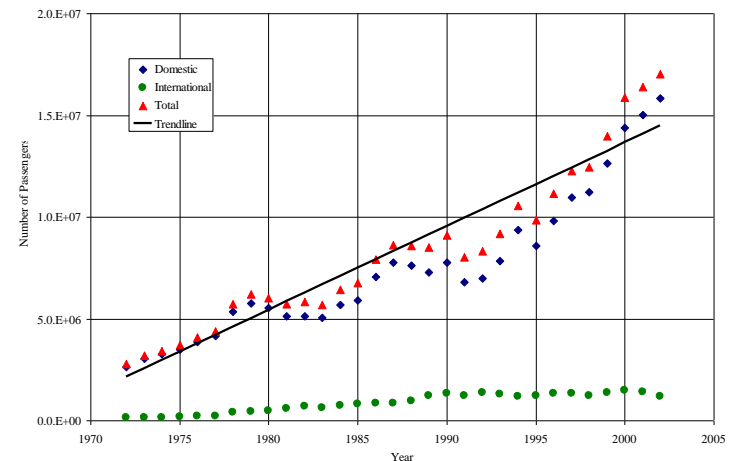


Figure 1: Analysis of commercial flights (domestic and international) between 1972 and 2002.

EDITING

Writing Hints, continued

- Watch significant figures
 - Keep within orders of magnitude
 - Reasonable, and consistent
- Keep the leading zero with a decimal point number, otherwise it looks like a period in the middle of the sentence.
 - ✗ The bridge cost .23 dollars per gram.
 - ✓ The bridge cost 0.23 dollars per gram.
- Use the dollar symbol
 - ✗ The bridge was four thousand dollars.
 - ✓ The bridge was \$4,000.

When editing ...

- Read it out loud!
 - Read what it ACTUALLY says, not what you think it should say
 - Use commas as small pauses, periods and semicolons as long pauses
- Have someone read it out loud to you
- Read it twice!
 - Once for flow
 - Once for technical stuff
- Take time to edit!! Don't turn in sloppy work.

COMMON MISTAKES

Common Mistakes

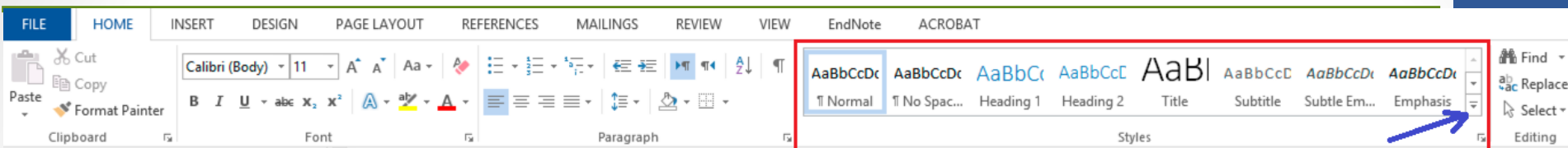
- Introduction badly written
- Missing story of your training
- Copy and paste from books/other places
 - Plagiarism is an academic crime
- Figures and tables without proper captions and numbering
- No reference of figures and tables in the text
- Headings and subheading not numbered
- Automatic TOC not used

Using MS Word's Style

Headings

Table of Contents

Using Styles



- The “Styles” sub-menu
- Located on the “Home” menu
- Click the down arrow button
- All the available styles as show on the next slide

Using Styles



The image shows a style gallery with two rows of text samples. The first row includes 'Normal' (highlighted with a blue border), 'No Spacing', 'Heading 1', 'Heading 2', 'Title', 'Subtitle', 'Subtle Emphasis', and 'Emphasis'. The second row includes 'Intense Emphasis', 'Strong', 'Quote', 'Intense Quote', 'Subtle Reference', 'Intense Reference', 'Book Title', and 'List Paragraph'. Below the samples are three buttons: 'Create a Style', 'Clear Formatting', and 'Apply Styles...'. Each sample shows a preview of the text style and its name below it.

AaBbCcDc ¶ Normal	AaBbCcDc ¶ No Spac...	AaBbCc Heading 1	AaBbCcD Heading 2	AaB Title	AaBbCcD Subtitle	AaBbCcDc Subtle Em...	AaBbCcDc Emphasis
AaBbCcDc Intense E...	AaBbCcDc Strong	AaBbCcDc Quote	AaBbCcDc Intense Q...	AaBbCcDc Subtle Ref...	AaBbCcDc Intense R...	AaBbCcDc Book Title	AaBbCcDc ¶ List Para...

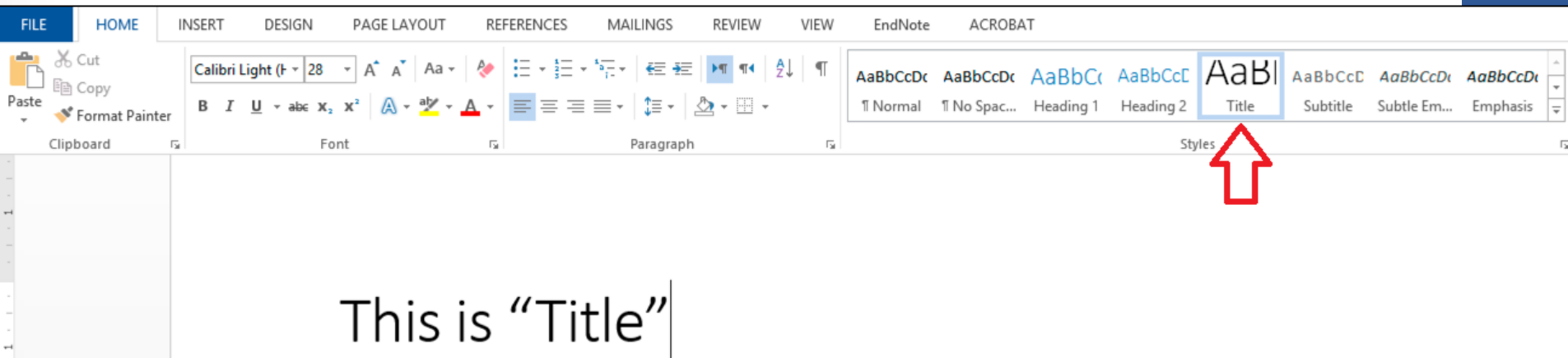
Create a Style

Clear Formatting

Apply Styles...

Using a Style (Example of Title)

- Bring the mouse pointer at the place you want a style
- click “Title” in the “Style” sub-menu
- Start typing
- Update the style as you wish



Updating a Style

- Select the word or paragraph
- Select the style from Styles submenu
- Right-mouse click on the selected style
- Redefine the styles in terms of font, spacing, etc.

Create Numbered Headings

The screenshot displays the Microsoft Word interface with the 'REFERENCES' tab selected. The ribbon shows various list creation options. A red arrow points to the 'Numbered List' icon (1, 2, 3). The 'List Library' task pane on the right shows the 'Current List' section with '1 Heading 1', '1.1 Heading 2', and '1.1.1 Heading'. The 'List Library' section shows a grid of list styles. The 'None' style is selected, and the '1 Heading 1' style is highlighted with a red box.

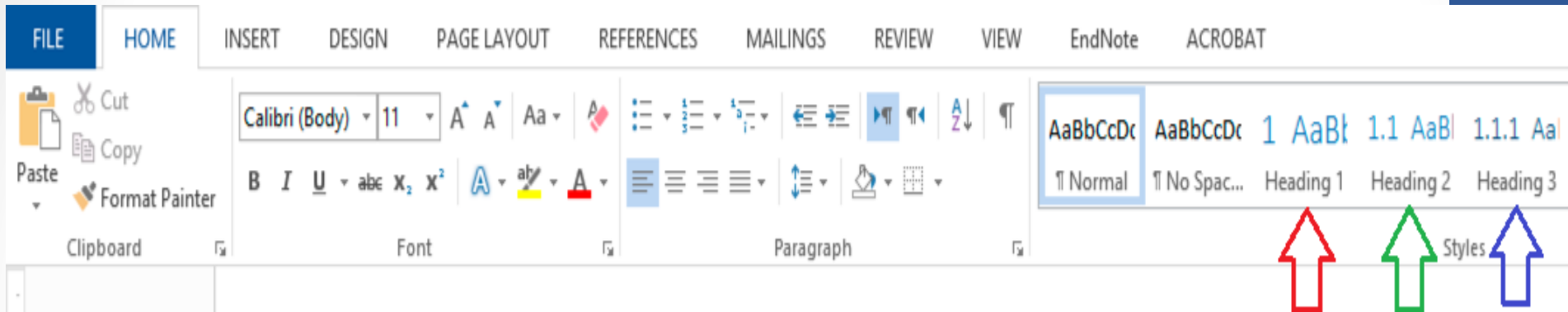
Current List

- 1 Heading 1
- 1.1 Heading 2
- 1.1.1 Heading

List Library

None	1) _____ a) _____ i) _____	1. _____ 1.1. _____ 1.1.1. _____
❖ _____ > _____ ▪ _____	Article I. Heading Section 1.01 H (a) Heading 3	1 Heading 1 1.1 Heading 2 1.1.1 Heading

Create Numbered Headings



1 This is heading 1

This is normal text under heading 1

1.1 This is heading 2

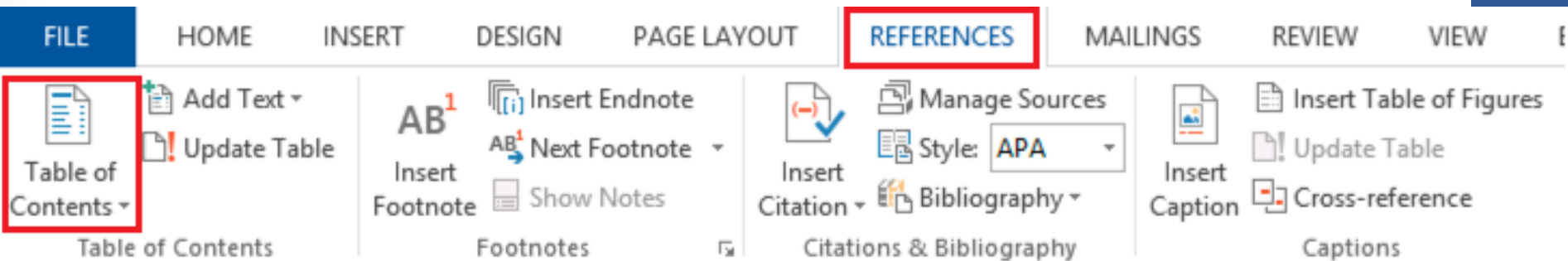
This normal text under heading 2

1.1.1 This is heading 3

This is normal text under heading 3

Create Table of Contents

1. Click at the point where you would like to have Table of Contents
2. Click “References” and then “Table of Contents” as shown below



Example of Table of Contents

- Clicking “Table of Contents” shows several options. Select the first or second option

The screenshot shows the Microsoft Word interface with the REFERENCES tab selected. The 'Table of Contents' button in the leftmost group is highlighted with a red box. A dropdown menu is open, showing two options: 'Automatic Table 1' and 'Automatic Table 2'. Both options show a preview of a table of contents with three levels of headings (Heading 1, Heading 2, and Heading 3) and their corresponding page numbers (all set to 1). The 'Automatic Table 1' option is selected, and its preview is shown in a larger window on the right side of the image.

Automatic Table 1

Contents	
1	Heading 1..... 1
1.1	Heading 2..... 1
1.1.1	Heading 3..... 1

Automatic Table 2

Table of Contents	
1	Heading 1..... 1
1.1	Heading 2..... 1
1.1.1	Heading 3..... 1

is heading 1
l text under heading 1
s heading 2
ext under heading 2
is heading 3

Example of Table of Contents

The screenshot displays the Microsoft Word interface. The ribbon at the top includes tabs for FILE, HOME, INSERT, DESIGN, PAGE LAYOUT, REFERENCES, MAILINGS, REVIEW, VIEW, EndNote, and ACROBAT. The HOME tab is active, showing the Font, Paragraph, and Styles groups. The Font group includes options for font face (Calibri Light), size (16), bold, italic, underline, and text color. The Paragraph group includes options for bullet points, numbering, indentation, and alignment. The Styles group shows various styles, with 'Heading 1' selected. Below the ribbon, a vertical ruler is visible on the left side. The main content area contains a Table of Contents and a list of headings with normal text.

Table of Contents

1	This is heading 1.....	1
1.1	This is heading 2.....	1
1.1.1	This is heading 3.....	1

1 This is heading 1
This is normal text under heading 1

1.1 This is heading 2
This normal text under heading 2

1.1.1 This is heading 3
This is normal text under heading 3