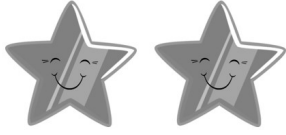


Partners

- Sit with your partner from last class



- Leave one empty chair between each pair, so we have a place to sit next to you to help

1

English Technical Writing

Gerry Rau
Fall 2023 (112-1)
Class 5

2

Feedback

3

Learned

- Components in Introduction

4

Liked

- Everything we did was so interactive, hoping to continue this during the coming weeks.
 - It will continue to be interactive!

5

Questions

- I don't know what is the research gap in the articles.
 - Engineering may not have a 'gap', but a 'goal'
 - Gap = nothing has been done (new data)
 - Goal = we will do it better (new design)

6

5

6

Homework + Working with Word

7


On time

- All on time!
- Keep it up
- If it is not finished: turn it in anyway

Points you gain < Points you lose
by finishing by being late

8

General principle of writing

- Start with the known or expected
- Move to the new or unexpected
- Why are your papers in the order you chose?
- Would it make more sense to change the order?
 1. Standard
 2. Non-standard
 3. Standard

9

General principle of writing

- Start with the known or expected
- Move to the new or unexpected
- Why are your papers in the order you chose?
- Would it make more sense to change the order?
 1. Standard
 2. Standard
 3. Non-standard

10

Section titles in IMRD/IMRaDC

- Section titles
 - Usually 'standard' (Methods, Experimental ...)
- Subsection titles
 - Often specific
- General format in field
 - "Based on the above, it seems that the general format expected is ... [but there are exceptions for ...]"

Make sure you
distinguish the two

11

Tables

- Mention every table in the text
 - Always, for all academic writing
 - "As shown in Table 1 ..."
- Table numbers
 - Sequential through the whole document
- Table titles
 - Not just article titles (the table does not show the article)
 - "Overall structure of [article 1]"
- Table format
 - Consistent within a type, like a journal in your field

12

Small problems

- % (Overall structure)
 - Round % to whole numbers
 - Word counts are not that precise
 - Always use the same precision for similar measures
 - Place in header, not each row of the table
- References
 - More than one = plural
- Line returns vs. Page break

13

13

Capitalization

- IEEE uses a lot of “small caps”
- this is called lowercase. (no capitals)
- This is called sentence case. (first letter capitalized)
- This is Called Title Case. (first letter of main words capitalized)
- THIS IS CALLED UPPERCASE. (all capitals)
- THIS IS CALLED SMALL CAPS. (title case, but with ‘small caps’ from the font tab)

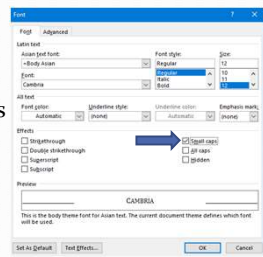
14

14

Small capitals

- From: A TITLE IN ALL CAPITALS
- To: A TITLE IN SMALL CAPITALS

1. Font/Change case [Aa]/ Capitalize each word
2. Minor words: all small letters
3. Font pulldown/Small caps



15

15

Repeat command (Control Y)

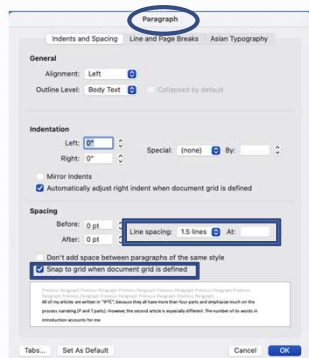
- TITLE 1 Capitalize first letter
- TITLE 2 Control y = Repeat command
- Title 1 Small caps
- Title 2 Control y = Repeat command
- TITLE 1
- TITLE 2

16

16

Line spacing

- Chinese vs. English
 - Chinese:
 - 1.15 lines
 - Snap to grid
 - English:
 - Single
 - Do not snap to grid
- Paragraphs in tables
 - Use ‘space after’ to separate cells

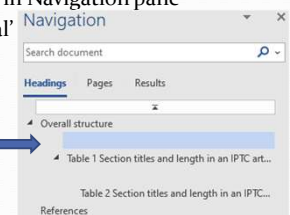


17

17

Headers/Navigation pane

- Make sure headings of one level are all the same level
- Blank headers
 - Occur when you add enter while on header line
 - Show up as blank lines in Navigation pane
 - Change back to ‘normal’



18

18

Table format

- Use ruler to indent second lines in an outline

Div.	Section/Subsection Titles	Para- graphs	Word count	%
I	I. INTRODUCTION	3	391	
II	II. EIGHT-ELEMENT PROGRAMMABLE PPA RECEIVER ARCHITECTURE	3	351	17

19

Show all

- Useful tool to show spaces, line returns, ...

Overall structure¶

Two of my articles follow IPTC format, but one follows IPC. As shown in Tables 1 and 2, for the first two articles, there are more than four sections, and at least some of the sections have titles specific to the research. In both articles, about half of the paper is in the Process division, as is common in IPTC. In the third article, as shown in Figure 3, there is no testing division, so this paper, which shows a mathematical proof, follows the IPC format.

20

Show all

To add it:
File/Options/
Customize ribbon/
All commands/
Show all/

Choose where

21

Demonstrating Continuity and Novelty

Peer Review
and
Work Time

Methods/
Process:
Purpose and
Components

Methods/
Process:
Component
Analysis

Assignment

22

Peer Review and Work Time

23

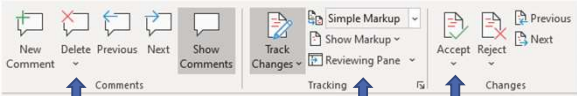
Peer Review

- Look at one another's homework
 - Writing a Claim
- What was good about your writing, format?
- What could you improve?
- Whose description is easier for others to read?
 - Why?
 - What makes it easy or difficult?

24

Fixing things: Track changes and Comments

- Viewing
 - Simple markup vs. All markup
- Changes
 - After checking: "Accept all"
- Comments
 - After fixing the problem: "Delete comment"



25

While you remember

- Make changes
- Overall structure and each division should have:
 - 1 Paragraph
 - 3 Tables
- Make and support a claim:
 - Claim: the articles do/do not match the expected format
 - Support: mention each Table


26

Working with Word: Reminder

- Headings
 - Navigation pane
- Tables
 - Titles (in format of journal)
 - Column alignment
 - Reduce number of lines
- Small caps (if used in your field)
- Track changes
 - Save a new copy and accept changes before going on

27

Connected yet Distinct



28

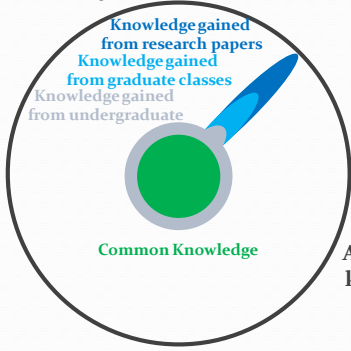
Connected yet Distinct

*"The **second division** does **not merely report** what you did, but more importantly how it is both **connected** to yet **distinct** from previous research"*

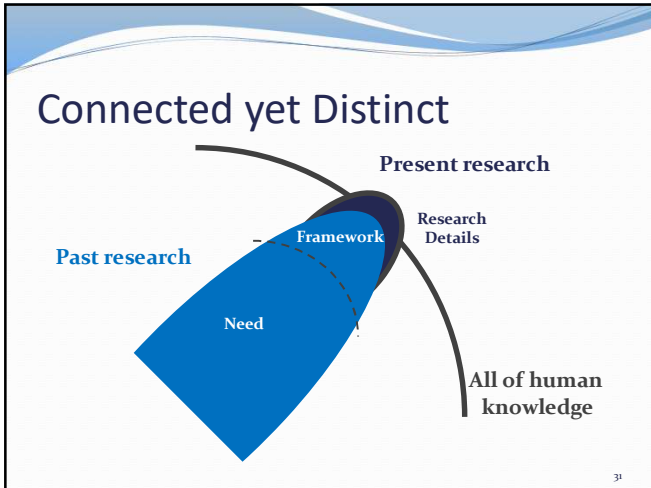
Past Research (Introduction) → Foundation → Present Research (Method/Process)

29

Connected yet Distinct



30



Evaluate your understanding

1. How is the purpose of the second division similar yet different in IMRD and IPTC?

32

31

32

Reliability and Feasibility of your Work

Implicit Claims in Second Division

IMRD (Reliability)	You have gathered data in a valid, reliable way
IPTC (Feasibility)	You have designed a workable solution to the problem

33

Reliability of your Work (Science)

Methods	5 Research details	Past	<ul style="list-style-type: none"> Follow past methods with minor modification Emphasize similarity to past work Emphasize attention to detail in present work
	6 Testing methods	Past	

34

33

34

Feasibility of your Work (Engineering)

Process	4 Framework	Past	<ul style="list-style-type: none"> Build on past research with modification Emphasize difference from past work Emphasize achievement of research goal
	5 Research details	Present	

35

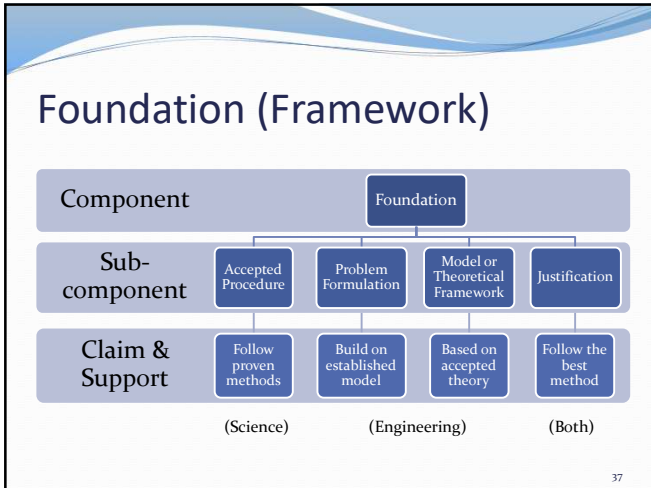
Evaluate your understanding

2. How do the components present in the second division differ in IMRD and IPTC?

36

35

36



37

Foundation (Framework)

- Reminder: Audio PPTs of each chapter on ECourse2
- Following 3 slides are in Audio PPT, with explanation

38

Foundation (Framework)

4) Framework

- Accepted procedures (IMRD)
Claim: Accepted procedures or proven methods were followed
Support: Past research (citations or general knowledge)
- Problem formulation (IPTC)
Claim: The research extends or builds on an established approach
Support: Past research (advantages of previous research approach)
- Model or theoretical framework
Claim: The research is based on an accepted model or established design
Support: Past research (model, framework, mathematical basis, design)
- Justification
Claim: This is the best method to follow for our research
Support: Past research (alternate methods)

Figure 5.1 Common subcomponents of Component 4, Framework

4c overlaps with both 4a and 4b, emphasis on theory

39

Focus of each component

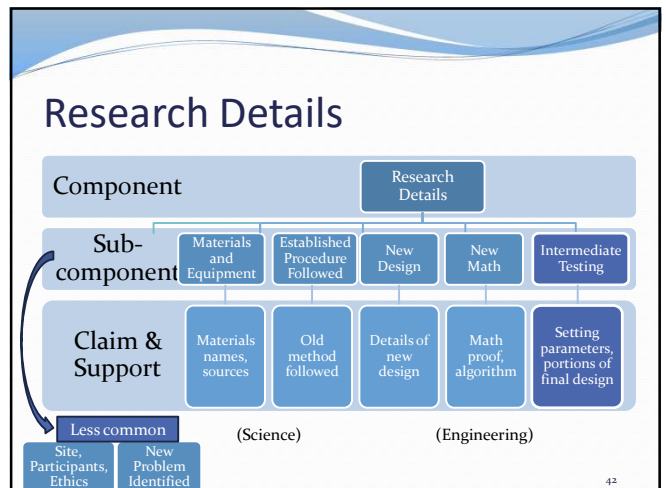
- Need: gaps or limitations of previous work
- Foundation: advantages of one previous approach
- Research details: distinctive features of present work

40

Distinguishing Foundation

- Is this describing limitations of previous research (2) or advantages the current work builds on (4)?
- Is this background necessary to understand the current research (4) or the current research itself (5)?

41



42

Intermediate testing

- For testing during development (before final design)
 - Call it 5g: Intermediate testing
- If intermediate test results are reported
 - Call them 7
- Note: Parameters are
 - Listed in a table, but not data
 - Inputs (5 or 6), not outputs/data (7)

43

Testing Methods

Good teachers are always learning and improving

44

Evaluate your understanding

3. Why are organizational features like summaries and topic sentences more important in the second division of IPTC than IMRD?

45

IMRD vs IPTC

	Method	Process
Similarity to other papers	• High	• Low
Length of division	• Short	• Long
Importance of division	• Low	• High
Style introductory paragraph	• No	• Yes

46

Second Division: Method / Process

47

Exemplar presentations

• Introduction	9/26	Neo
• Process/Method	10/3	Hai
• T&C / R&D	10/17	Charles
• Citations	10/24	Tran
• Graphics	10/31	Charlene

48

Process/Method Division Components

Exercise 5.1



49

49

Exercise 5.1

1. Identify the components in each paragraph in the second division of your first exemplar article and the component markers that help you identify them.

- *Hint: Look for components 4, 5 and possibly 6*
- *Hint: Look at section/subsection titles!*
- *Hint: See additional Hints in textbook*

50

50

Exercise 5.1

2. Does the second division follow the order of components as listed?
3. Are there any organizational features such as an introductory paragraph? Are there any other important features to help the reader, such as a figure showing the overall process?

- *Hint: These are very field-specific*
- *Hint: See additional Hints in textbook*

51

51

Assignment



52

52

1 Write

- Correct previous work (give the file a new name)
 - Writing a Claim (→ Peer Review = Next assignment)
- Add today's work
 - Homework, Chapter 5 (today)
 - Process/Methods for all 3 articles
- Format using Word features
 - Tables, Headings, Spacing, Track changes (clean copy)

53

53

2 Read

- Chapter 6 (Testing and Conclusion)

54

54

Exemplar presentations

- Introduction 9/26 Neo
- Process/Method 10/3 Hai
- **T&C / R&D 10/17 Charles**
- Citations 10/24 Tran
- Graphics 10/31 Charlene

55