LC-1114 Communicating Technology

Session 2

A"
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7 May 2024

Today's topics

- Clarity and readability

- Giving and receiving feedback: peer feedback on A2

- Extended definitions : assignment 3

- Organising and beginning your presentations

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Content and form

Reader-responsible vs. Writer-responsible cultures

1. Reader-responsible writing culture

- Responsibility for understanding message is on the reader
- Avoids stating the obvious
- Avoids repetition
- Preference for complicated structures

2. Writer-responsible writing culture

- Responsibility for getting message across is on the writer
- Gives a lot of background information
- Repetition and summaries
- Language is clear and simple

Source: Hinds, J. (1987). Reader versus writer responsibility: A new typology. In U. Connor & R. B. Kaplan (Eds.), Writing across languages: Analysis of L2 Text (pp. 141-152). Reading, MA: Addison-Wesley.

Consider the Finnish and the Anglo-Saxon writing conventions, to which cultures do they belong?

In the 'Anglo-Saxon' academic world, texts are typically 'expected' to be more 'writer-responsible' Finnish writing culture is a mixture of these two.
Source: McCool (2009), p. 123

Paragraph – a basic unit for organising information

Paragraph structure and topic sentences

Task 1: Work in groups of 3.

Each group member reads a different text which covers the topics:

- paragraph structure
- topic sentence
- transitions/coherence & cohesion

- **After reading, you will complete the Task 1 on the handout and analyse a brief paragraph together with your group. Be prepared to justify and share your analysis.**

Basic paragraph structure

Topic sentence

- Presents the main idea/claim of the paragraph and how it will be treated

Supporting sentences

- Give evidence: explain, exemplify and expand the topic sentence. For instance, present examples, cite your data, provide facts/statistics, cite experts

Concluding sentence

- Shows that the paragraph is complete: summarises the key point or draws a conclusion based on the presented information, links the paragraph content to the overall aim of the text OR transitions to a new paragraph

Sources:
- Monash University (2024). *Build clear paragraphs.* [Online]. Student Academic Success. Available at: https://www.monash.edu/student-academic-success/excel-at-writing/improve-your-writing/write-clearly/build-clear-paragraphs [Accessed 2 May 2024].
- Purdue University (2024). *On Paragraphs.* [Online] Purdue Online Writign Lab. Available at: https://owl.purdue.edu/owl/general_writing/academic_writing/paragraphs_and_paragraphing/index.html [Accessed 2 May 2024].

Task 1: Does this text follow the guidelines given for writing paragraphs? Why/why not? Discuss in your groups/pairs.

The Key River Water Treatment Plant is a state of the art facility which processes 20,000 tonnes of domestic wastewater yearly.

Of this, 78% is recycled and the remainder treated before being pumped into the sea. The treatment process has three steps.

First, primary solids are removed using dissolved air floatation, clarification and sedimentation. The water then undergoes two filtration stages, and finally chlorine disinfection. The extracted waste goes to the local landfill.

6.5.2024

Task 1: Does this text follow the guidelines given for writing paragraphs? Why/why not? Discuss in your groups/pairs.

The Key River Water Treatment Plant is a state of the art facility which processes 20,000 tonnes of domestic wastewater yearly. Of this, 78% is recycled and the remainder treated before being pumped into the sea. The treatment process has three steps. First, primary solids are removed using dissolved air floatation, clarification and sedimentation. The water then undergoes two filtration stages, and finally chlorine disinfection. The extracted waste goes to the local landfill.

Useful links and resources

- For help on sentence style, check: http://sana.aalto.fi/awe/style/sentence/index.html

- For help on vocabulary choice, use an English-English dictionary, thesaurus or see http://sana.aalto.fi/awe/style/vocabulary/index.html

- Academic phrasebank: https://www.phrasebank.manchester.ac.uk/

- Editor / checker: http://www.grammarly.com

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Readability

Tips and exercises on how to improve readability, see

- Info ordering: http://sana.aalto.fi/awe/cohesion/infostrux/index.html

- Signposts: http://sana.aalto.fi/awe/cohesion/signposts/index.html

- Topic sentences: http://sana.aalto.fi/awe/cohesion/topsen/index.html

- Punctuation: http://sana.aalto.fi/awe/punctuation/commas/index.html

Giving and receiving feedback

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What kind of feedback is effective?

- Descriptive, specific and performance focused

- Timely

- Balanced: positive and negative

- Solution focused

The Hamburger model

People can handle feedback better if it is presented with positive aspects as well.

- Start with something positive ("the bun")

- "The beef" is the constructive part (**Don't** start with **'but'** or **'however'**)

- Conclude with something positive again ("the bun")

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The Hamburger model

- The ideas in the introduction are relevant, and they are organised logically. Furthermore, the connections between the ideas are clear because you use sentence connectors and introductory phrases. This makes the text easy to read and understand.

- Unfortunately, the text does not provide in-text references to sources. I think it is important to include them to help the reader to find the information and give credit to the original author. Perhaps you could check your text once more and add suitable in-text references?

- With appropriate in-text referencing, you will have a perfect introduction!

Techniques to soften the message

1. **Using modal verbs:** could, would, might

2. **Questions, Adding 'not' to questions, 'why not…?':** Could you change…? Couldn't you change? Why not change?

3. **Introductory phrases:** I am afraid, to be honest, well, actually, frankly

4. **Qualifiers:** a slight misunderstanding, a short delay, a little bit too early, a bit of a problem, some reservations

5. **Stressed words:** You've done quite WELL, You've done QUITE well…

Assignment 2
Peer review

Peer review – assignment 2 (Time: altogether 30 min)

In pairs, teacher assigns.

1. Exhange your texts with your pair via email.

2. Read the given text twice (20 min) and **fill in the feedback form**:
   - First, focus on the questions in PART A
   - Read again and focus on the questions in PART B

What was positive about the text? What improvements would you make?
Write down your comments on the form or on the text.

3. Get together with the author and explain your findings and suggestions (5+5 min).

4. Next, send the completed feedback form (and the text if you made comments on it) to your pair via email.

Next step

Assignment 2: Introduction (Problem-solution):

Make all necessary changes to your assignment 2 based on the peer feedback and submit the text to Turnitin via MyCourses (submission box under *Assignments*) **by Friday 10.5.24**.

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Time for a break!

Definitions:

Technical writing for non-expert audiences

What is a definition?

- A definition answers the question **"what is it?"**

- A definition gives readers information about the **meanings of terms and concepts.**

How much information do readers need?

- Always define **new terms** and **concepts**.

- Define terms you use in a **non-standard** way.

- Define the terms you use if you are **unsure** readers will understand them.

- The **less readers know** about the topic, **the more you need to explain** the terms using language they can understand.

Task 3: Effective definitions (see handout)

Which one of these definitions is the most effective?

What makes the others less effective?

a) A biofuel is derived from renewable sources.

b) A biofuel is a transportation fuel that is derived from renewable sources, such as plant biomass and municipal wastes.

c) A biofuel is a transportation fuel. It is derived from renewable sources. For example, biomass and municipal wastes can be used for developing biofuel.

Task 3: Effective definitions

Which one of these definitions is the most effective?

What makes the others less effective?

a) A biofuel is **a what?** derived from renewable sources.
b) A biofuel is **a transportation fuel** that is derived from renewable sources, such as plant biomass and municipal wastes.   **Sentence definition** ✅
c) **A biofuel** is a transportation fuel. **It** is derived from renewable sources. For example, biomass and municipal wastes can be used for developing **biofuel**.

Types of definition

1. Parenthetical definition

2. Sentence definition

3. Extended definition

1. Parenthetical definition

A parenthetical definition explains a term briefly in **parenthesis** or between **commas** using synonyms or examples.

Examples:

A term **(definition)**

The Mars mission was originally funded to last 90 **sols (One sol equals 24.65 hours)** and to end last April.

A term, definition,

The Mars mission was originally funded to last 90 **sols, the equivalent of 90 Mars days,** and come to an end last April.

2. Sentence definition

Good sentence definition consists of **three elements**:

1. Term = **object** / **concept** to be defined

2. Class = **group** to which the object / concept belongs

Superordinate term!

3. Characteristics = specific details that separate it from others in the same class.

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2. Sentence definition

TERM	=	CLASS	+	CHARACTERISTICS
A car	is	**a** motor **vehicle**	**that**	is used for transporting passengers.
A truck	is	**a** motor **vehicle**	**that**	is used for transporting freight.
A house mouse	is	**a** small **rodent**	**that**	lives in a tiny hole and eats cheese.
An optical mouse	is	**a** pointing **device**	**which**	functions by detecting two-dimensional motion relative to its supporting surface.
A CEO	is	**a person**	**who**	manages a corporation.
A university	is	an **organization**	**where / in which**	research and teaching is performed by scientists.

'Umbrella' terms that can stand for an entire class or category of things.

Typical superordinates for formal texts:

Option	Alternative	Example
Criterion	Feature	Aspect
Benefit	Advantage	Drawback
Problem	Issue	Approach
Technique	Method	Strategy
Procedure	Tool	Reason
Rationale	Motivation	Consequence
Effect	Phase	Stage
Step	Solution	

Task 4, work in pairs/groups:

The terms and the characteristics are given in the following sentence definitions.
Add the missing superordinates to describe the class of things these
objects/concepts belong to.

1. A machine is any **device** that uses energy to perform some activity.

2. Water distillation is **a process** in which volatile gases are removed in a degasification chamber.

3. Body mass index (BMI) is **a measure** of body fat based on height and weight that applies to both adult men and women.

4. Methane is a chemical **compound** with the molecular formula CH4.

Sentence definition

Write a sentence definition of the solution you introduced in Assignment 2. Make sure it includes the three elements of a good sentence definition:
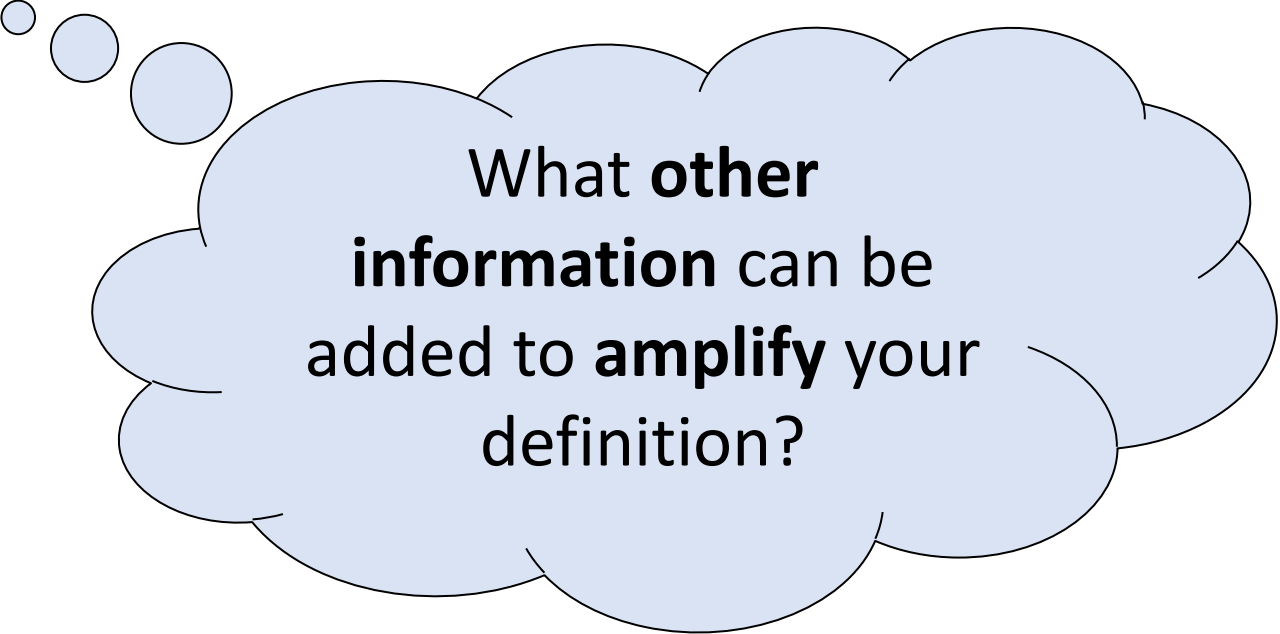
- Term
- Class (category to which it belongs = superordinate term)
- Characteristics (details that separate it from others in the same class).

For example: A biofuel is **a transportation fuel** that is derived from renewable sources, such as plant biomass and municipal wastes.

3. Extended definition

- Extended Definitions usually begin with **a sentence definition**.

What **other information** can be added to **amplify** your definition?

3. Extended definition

Eight methods for amplifying an extended definition:

1. **Analysis of parts**   (What are its parts? classes? types?)
2. **Operating principles**   (How does it work?)
3. **Applications / Examples**   (How is it used or applied?)

4. **Analogy / Comparison**   (Is it similar to something familiar?)
5. **History**   (What is its origin? Who developed it?)
6. **Advantages / problems**
7. **Requirements**   (What is needed to make it work?)
8. **Physical appearance / features**   (What does it look like? What are its characteristic features?)

   → what type of information would be relevant for your intended client and the topic of your extended definition assignment?

Task 5: Extended definition: Biofuel (see handout)

Take a look at the excerpts taken from extended definitions.

Which method of amplification has been used in each?

A. Currently, the fossil resources are not regarded as sustainable and questionable from the economic, ecology and environmental point of…Consequently, there is renewed interest in the production and use of fuels from plants or organic waste. 5. Background

B. Biofuels are divided into two categories: first and second generation biofuels. First generation biofuels are made from the sugars and vegetable oils found in arable crops, which can be easily extracted using conventional technology. In comparison, second generation biofuels are made from lignocellulosic biomass or woody crops, agricultural residues or waste, which m 1. Analysis of parts (categories) 7. Requirements 8. Features

C. Biodiesel is the most common biofuel in Europe. It is produced from oils or fats using transesterification and is a liquid similar in composition to fossil/mineral diesel.

3. Example 4. Analogy

Extended definition task: Biofuel

D. Biodiesel can be used as a fuel for vehicles in its pure form, but it is usually used as a diesel additive to reduce levels of particulates, carbon monoxide, and hydrocarbons from diesel-powered vehicles. Biodiesel is produced from oils or fats using transesterification and is the most common biofuel in Europe. 3. Applications 6. Advantages 7. Requirements?

E. Pure biodiesel (B100) currently reduces emissions with up to 60% compared to diesel Second generation B100. 6. Advantage 4. Comparison

F. The main disadvantage of first generation biofuels is the food-versus-fuel debate, one of the reasons for rising food prices is due to the increase in the production of these fuels [8]. Additionally, it is claimed that biodiesel is not a cost efficient emission abatement technology. 6. Disadvantage

Sources: Biofuel. Wikipedia. Available at http://en.wikipedia.org/wiki/Cloud_computing . Retrieved 3rd September, 2014. Naik, S.N., Goud, V.V., Rout, P.K & Dalai A.K. 2010. Production of first and second generation biofuels: a comprehensive review. Renewable and Sustainable Energy Reviews. Vol 14(2), 578–597.

Assignment 3: Description of the solution (5p)

- Write the **body paragraph(s) (250-300 words)** for your recommendation report in which you describe the solution you are proposing to your client. Research the solution further to find relevant facts and figures. Use them to describe the key properties of the solution.

- **Pattern of organization:** Sentence definition + Extended definition

- **Style:** Formal

- **Audience:** Decision makers (your client, educated but non-expert). **Choose information that is relevant to your client.**

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Assignment 3 content

Assignment 3 must include the following elements:

- **Title** (name of the **solution**)

- **Sentence definition**

- **3-4 types of defining information** (amplification methods)
  For example: analysis of parts, operating principles,
  applications/examples, analogy/comparison,
  advantages/disadvantages, or physical appearance/ features

Check the instructions in Assignments in MyCourses!

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Assignment 3 content

- Include in-text references & a list of references (use at least 2-3 sources) in your text indicating the sources you have used to find the information (follow the conventions of your field).
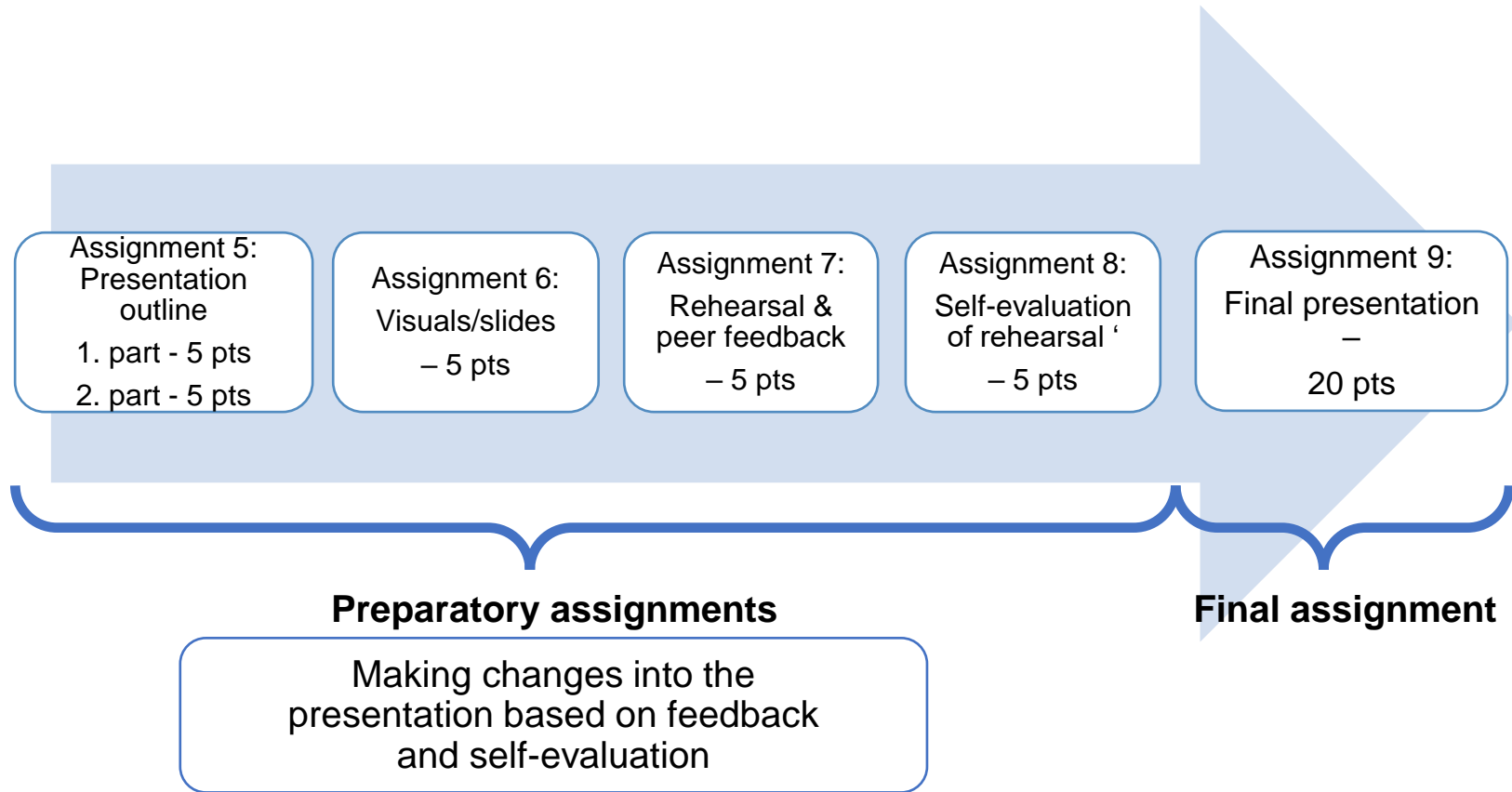
Due dates:

1. Bring a copy of your A3 (Extended definition) to our next meeting on Tuesday 14.5.24 to get peer feedback on it in class.
2. After peer feedback and revisions, submit the text to Turnitin via MyCourses (under *Assignments*) by Friday 17.5.24.

Final presentation

Final Presentation Building Process

Assignment 5:
Presentation outline
1. part - 5 pts
2. part - 5 pts

Assignment 6:
Visuals/slides
– 5 pts

Assignment 7:
Rehearsal &
peer feedback
– 5 pts

Assignment 8:
Self-evaluation
of rehearsal '
– 5 pts

Assignment 9:
Final presentation
–
20 pts

Preparatory assignments

Final assignment

Making changes into the presentation based on feedback and self-evaluation

8-10 -minute individual presentations

Content: a perspective / aspect of your topic, for example:

- **An extended definition/description of an interesting/recent solution in your field**
    - But: a description of the context is needed! → why has it been developed?
    - Audience: this group of students

- **Presenting a problem and a solution developed in your field (problem-solution pattern)**
    - Audience: this group of students

8-10 -minute individual presentations

Content: a perspective / aspect of your topic, for example:

- **Presenting your recommendation to your client's problem**
    - Audience: your client

- **Comparing and contrasting 2 solutions to a problem and recommending the most feasible one**
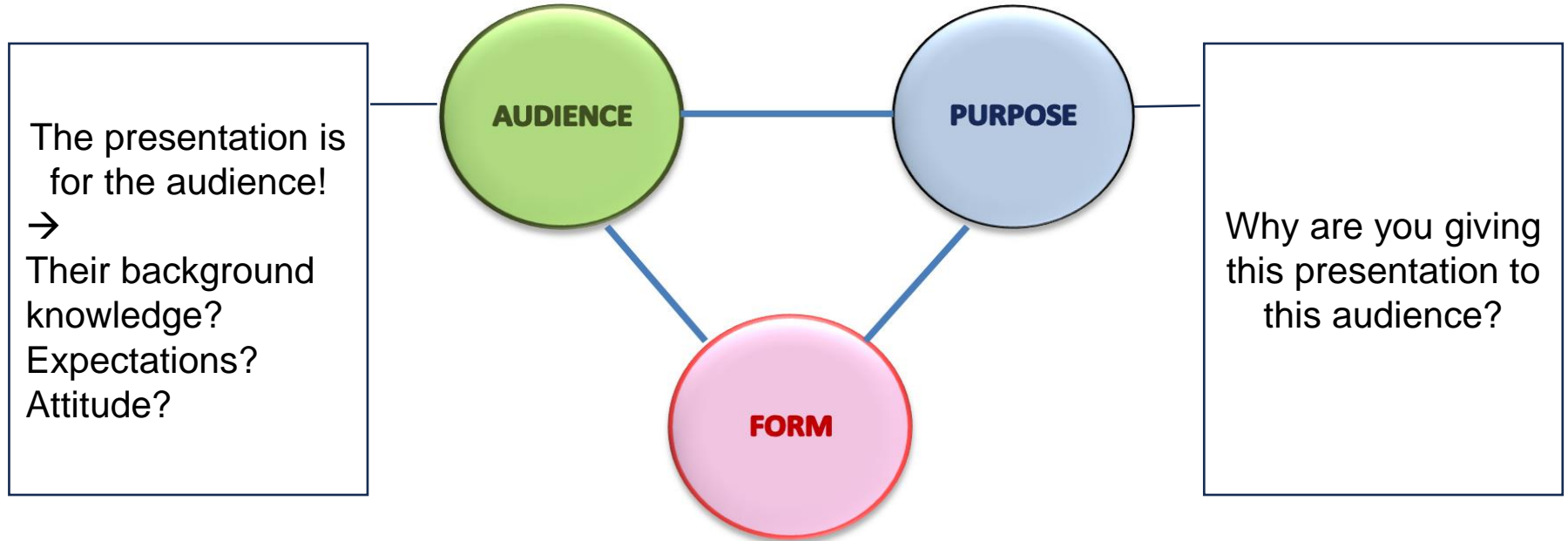   - Audience: your client

Organising the presentation: Building an effective presentation

What makes an effective presentation?

Discuss in groups of 3-4:

- **Elements of an effective presentation in English?**

- **Secretary**: writes down your top-3 elements of an effective presentation in English.

- **Chair**: briefly reports on the main ideas of your discussion to the rest of us.

Successful communication

The presentation is for the audience!
→
Their background knowledge?
Expectations?
Attitude?

AUDIENCE

PURPOSE

FORM

Why are you giving this presentation to this audience?

When building a presentation, you need to ask yourself a few questions:

Why are **you** giving this presentation to this audience?

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

What should the **audience** **believe** or **do afterwards**?

What does your **audience expect**?

What is your **audience's attitude** toward your claim?

→ **Presentation outline** → **you need to answer these questions**

What is your purpose or goal?
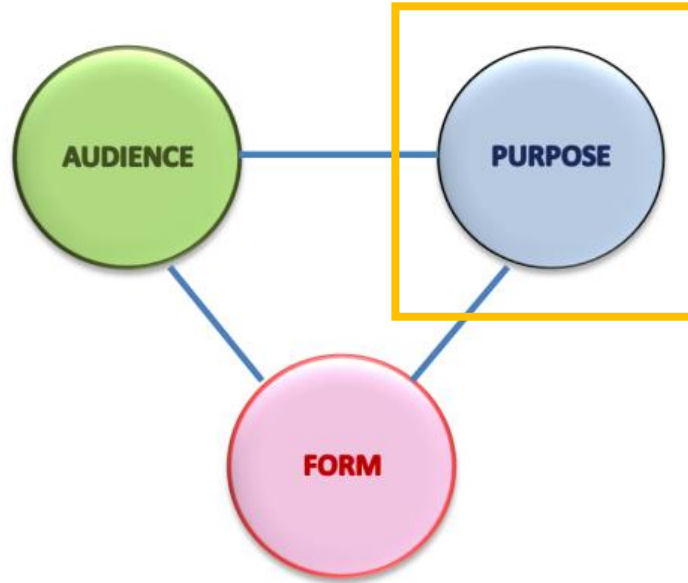
→ Purpose controls content

Defining the purpose

What is your goal?
To inform? To persuade?

For example, describe a technical concept, phenomenon or innovation developed and explain why (extended definition)

For example, recommend a solution to a problem (problem-solution, recommendation)

Writing a purpose statement

"Exactly what is it about my topic that I want the audience to **learn** or **do**?"

"I want my audience to……………………………………….."

"I want my audience to **believe** that wind turbines are an environmentally friendly solution to help them produce electricity for their homes and also reduce their electricity bills."

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Who is your **audience**?
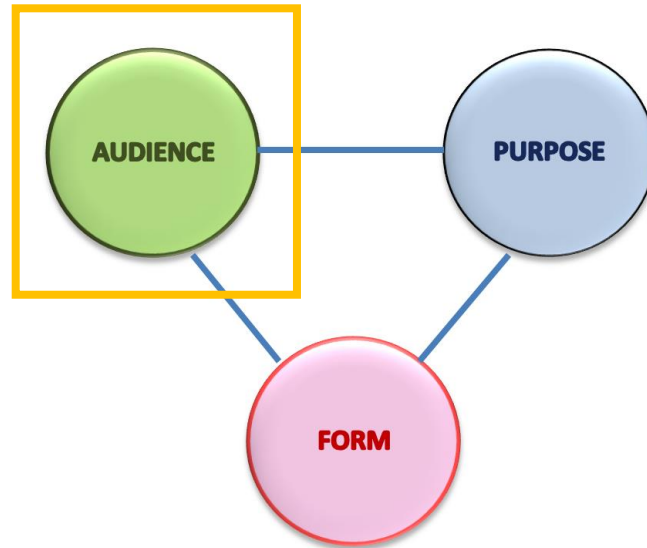
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Analysing your audience

You are more likely to give the most effective presentation when you understand your audience's **interest** and **knowledge** levels, as well as their **attitude** toward you and your goal.

→ Successful presentation

Task 7: Get to know your audience

- 2 minutes for sketching a few questions related to your presentation
- After that, about 15 minutes for interviewing three-four members of your audience with those questions
- For example:
  - Explain the topic in one sentence
    - How much do your small group members know about it?
    - What would your small group members want/need to know about it?
    - → audience **interest**, **knowledge** and **attitude**

- Thinking about your purpose
  - How can you motivate the audience to listen to you?
  - How much background information do you need to give?
  - Is your audience's attitude likely to be in favour, neutral, opposed?
    - → What strategies will you use to adapt to that attitude?

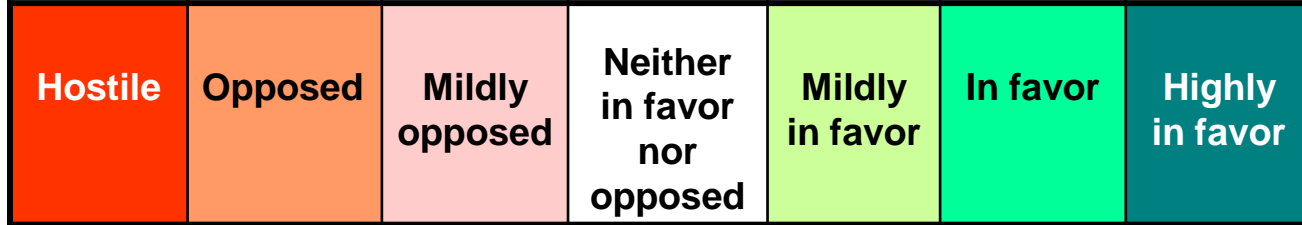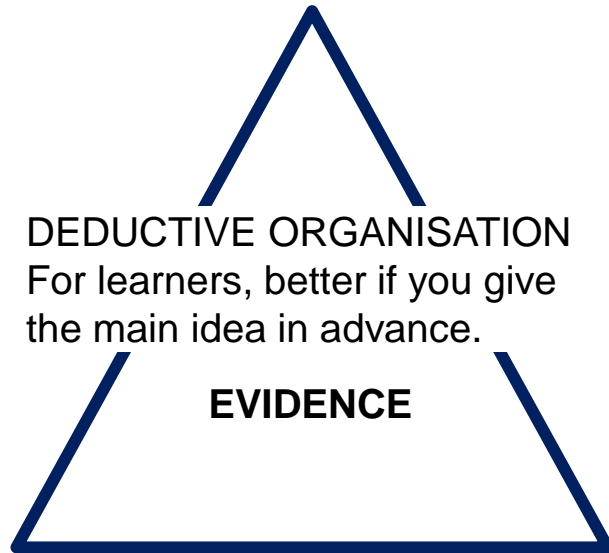# How to structure your presentation?
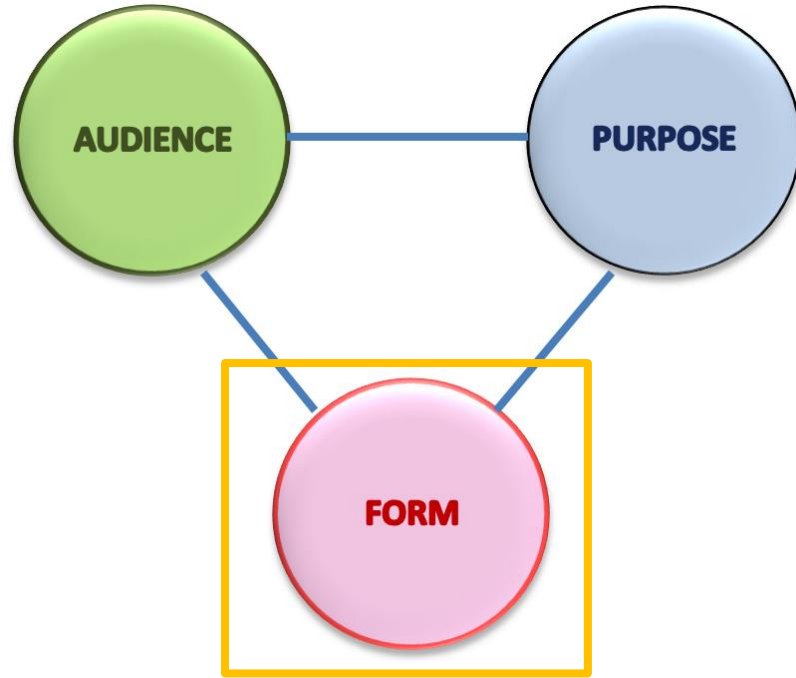
AUDIENCE ATTITUDE

Hostile	Opposed	Mildly opposed	Neither in favor nor opposed	Mildly in favor	In favor	Highly in favor

Figure 13.1 Opinion continuum

What strategies should you use for each type of audience?

Which audiences would react better to these two patterns of organisation?

CLAIM

DEDUCTIVE ORGANISATION
For learners, better if you give the main idea in advance.

EVIDENCE

EVIDENCE

INDUCTIVE ORGANISATION
If audience disagrees with you, an indirect approach might be better.

CLAIM
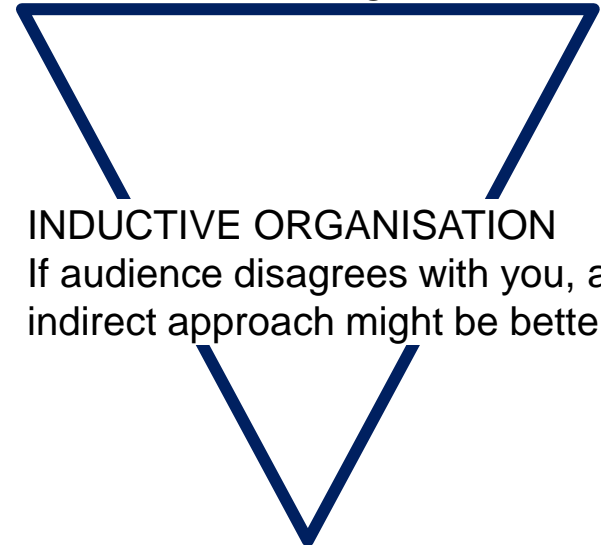
Basic presentation structure

About 10-15%

About 80%

About 10%

Main point 1 — •Sub-point / •Sub point

Main point 2 — •Sub point / •Sub point

Main point 3 — •Sub point / •Sub point

INTRODUCTION

BODY

CONCLUSION
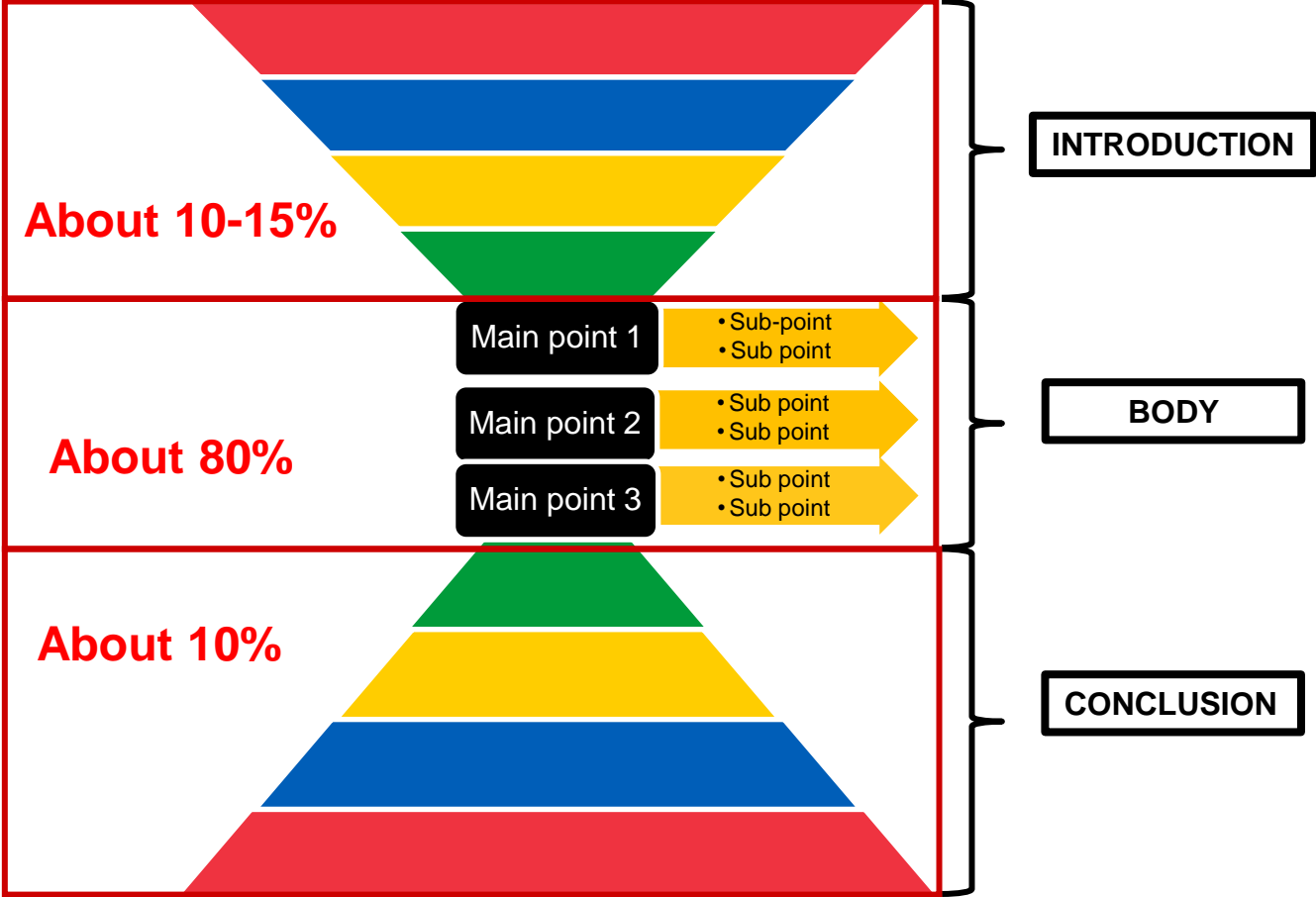
How to begin a presentation

Task 8: How to begin a presentation?

We will watch the first 1-2 minutes of three different TED talks

While you watch, make notes:
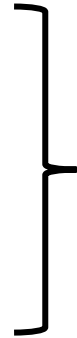
How do the presenters begin their talks?

What do the presenters try to do by beginning in that way? Is it effective or not?

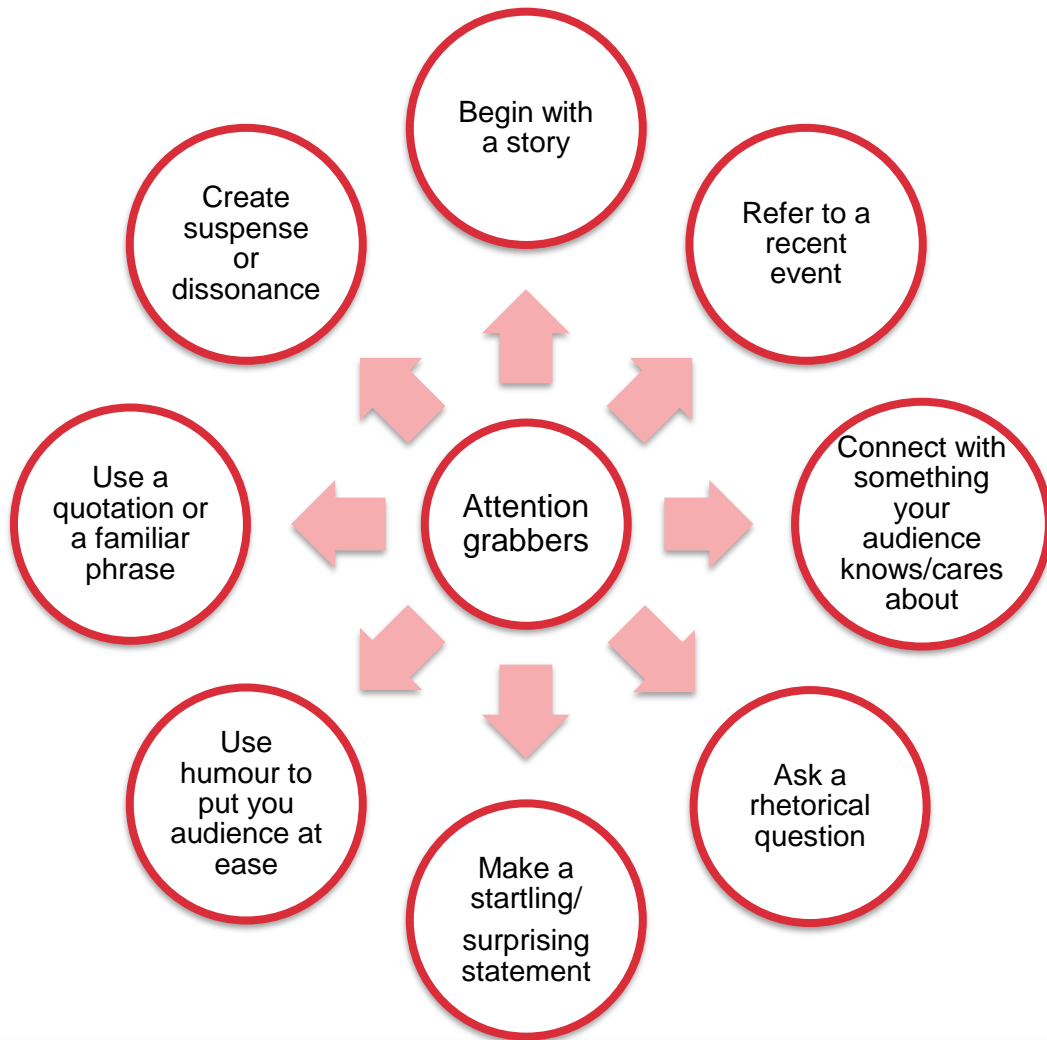**In pairs, discuss the introductions in those presentations**

1. (until 00.56) Virginia Smith: How we could better predict and stop floods | TED Talk
2. (until 00.40): Gavin McCormick: Tracking the whole world's carbon emissions -- with satellites and AI | TED Talk
3. (until 1.51): Luis von Ahn: How to make learning as addictive as social media | TED Talk

→ Vote: the most effective beginning? (1, 2 or 3?)
→ Be prepared to justify your vote!

CAPTURE ATTENTION

INTRODUCTION

Begin with a story

Refer to a recent event

Create suspense or dissonance

Connect with something your audience knows/cares about

Use a quotation or a familiar phrase

Attention grabbers

Use humour to put you audience at ease

Make a startling/ surprising statement

Ask a rhetorical question

An example introduction

Did you know that the price of electricity has risen no less than 157 per cent in only ten years?

For a citizen like yourself living in a house with electric heating, this means nearly 1000 € more to be paid each year. **Moreover**, electricity is often produced using fossil fuels, which is a major factor contributing to global warming. If you care about our planet, you will want to stop using fossil fuels and begin to utilize renewable natural resources. **But how can we do this?**

My name is Matti Meikäläinen, and **I'm a graduate student** here at Aalto University, **majoring in** Energy Technology, **and am currently writing my thesis on the topic of renewable energy sources.**

Today, I'd like to introduce you to *an environmentally friendly solution* that will help you to **not only** produce electricity for your home **but also** reduce your electricity bills. *This solution is* **the wind turbine.**

I have divided my talk into three parts. First, we will look at current competing technologies. **Then, we will examine** the installation setup to find out where and how to situate your own wind turbine. **And finally, we will discuss** the advantages and disadvantages of residential wind turbines to see whether a wind turbine can work for **you**.
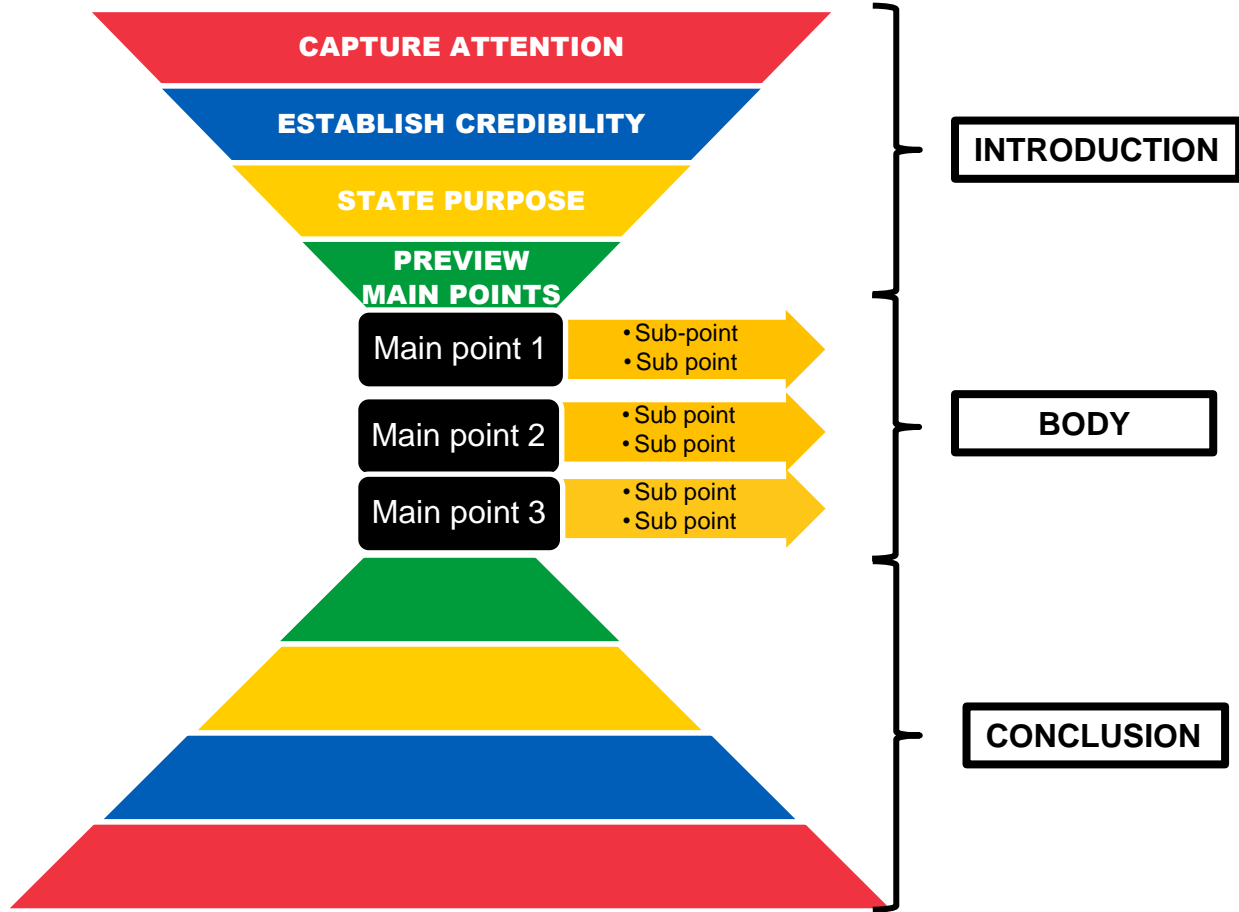
Organizing the body

Organizing the body of the presentation

STEP 1: **Research & select your main points**

- Use 2 - 3 main points (8-10 min presentation)
- Fewer points → greater recall
- Beginnings and endings are remembered best…

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Organizing the body of the presentation

STEP 2: **Support your main points**

- Present material or evidence to justify the main points.
- Use examples, definitions, analogies, facts, statistics.

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Organizing the body of the presentation

STEP 3: **Organize your main points**

- Use organization patterns (problem-solution, extended definition, compare and contrast, chronological, etc.)

  → Which pattern suits your purpose and the needs/ expectations of the audience?

Most common patterns of organization
(Scientific and technical texts)

- **Chronological description**: describing procedures, sequences of past events, reviewing literature

➤ **Common features:** Time adverbs (in 1980, first, second, finally, after the procedure,)

- **Cause-and-Effect Analysis**: making logical arguments, explaining reasons why something happened, predicting future sequences of events

➤ **Common features:** Connective words and phrases (therefore, thus, consequently, as a result, hence)

Most common patterns of organization

(Scientific and technical texts)

- **Comparison and Contrast**: comparing two or more things, similar or different

- ➢ **Common features:** Connective words and phrases (however, nevertheless, similarly, in contrast to, more than..less than…)

Tips: Avoid jumping back and forth from alternative X to Y! Organize wisely!

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Most common patterns of organization

(Scientific and technical texts)

- **Listing**: listing equipment, components, procedures, features

➢ **Common features:** formatted or unformatted lists

➢ Signals: Furthermore, moreover, in addition, another, a further, several, a number of, include, including, such as

- **Extended definition**: defining concepts, devices

➢ An extended definition: one or more paragraphs that attempt to explain a complex term

Homework

Homework

ASSIGNMENT 2: Introduction (problem-solution).

Submit your revised introduction paragraph to Turnitin for teacher feedback. Submission box in *Assignments* in MyCourses.

Due date: by Friday 10.5.

Complete the following Online modules:

- **Online module 3: Given-new principle** (takes about 3 hrs to complete)
- **Online module 4: Light-before-heavy principle** (takes about 3 hrs to complete)
- Due by 12.30 on 14.5.

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Homework

ASSIGNMENT 3: Solution (Extended definition)

Write the first draft of the A3 and bring in a copy to class in order to get peer feedback on it in our next Zoom session (due by 12.30 on 14.5.)

Note: You are expected to use the readability principles covered in the course in your assignments, so apply the knowledge you gain from classes and Online Modules when writing the assignments.

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Homework

ASSIGNMENT 5: Presentation outline, part 1

- Download the presentation outline template from MyCourses (in Assignments), follow the instructions and complete the first part of the outline.

See you next week!