

# Technical Communication 3

## FSP011

### Session 2: Critical reading & outline workshop

Anthony Norman (examiner)

[normana@chalmers.se](mailto:normana@chalmers.se)

Annamaria Gabrielli (instructor)

[annamaria.gabrielli@chalmers.se](mailto:annamaria.gabrielli@chalmers.se)

Kathy Strong Hansen (instructor)

[strong@chalmers.se](mailto:strong@chalmers.se)

# Today's agenda

- Mini-lecture: critical reading
- Workshop: constructing a report outline



Image by Prateek Katyal via Unsplash



A close-up photograph of laboratory glassware, including a graduated cylinder and several beakers, some containing liquids. A glass dropper is positioned over one of the beakers. The background is blurred, showing more lab equipment.

# Critical reading

A photograph showing a person's hands typing on a laptop keyboard. The person is wearing a light-colored sweater. The laptop is silver and the keyboard is black.

Images by Hans Reniers and Kailyn Baker via Unsplash

# Top reading tip

- As you read, take notes
- This makes it easier to find what you need later
  - Record key ideas / important information
  - Write questions, comments in the text

## Reading from a PDF?

- Use Adobe's highlighting tool
- Insert your questions/comments in a text box near the sentence(s) that raised your question

Image by Kailyn Baker via Unsplash



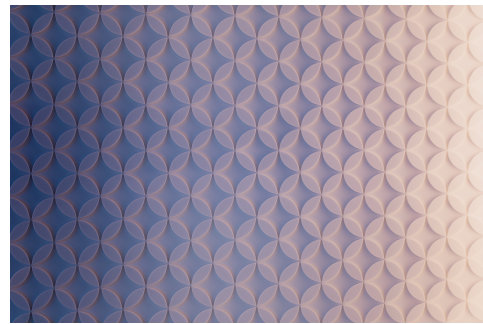
# Don't forget visual cues

- **Headings/subheadings** indicate what appears in each section.
- Helpful sections of scientific reports include
  - Background
  - Discussion
  - Results
  - Conclusion
- But some texts may have other headings that are equally or more important!
- **Tables/figures** provide data, plot sequences, or otherwise visually clarify important ideas

Image by Markus Winkler via Unsplash

# Look for patterns

- Recognizing the text's pattern of organization can help you understand its purpose.
- Common organization patterns:
  - Cause/effect
  - Comparison/contrast
  - Definition/example
  - Sequence
  - Analysis



Images by Annie Spratt, Ferdinand Stohr, & Jason Leung via Unsplash



# What about words you don't know?

- When do you look up words you don't know?
  - When not knowing the word prevents you from understanding the main point
  - When it appears multiple times in a text
  - When it is a keyword in the title
- Otherwise, let the surrounding context provide the information you need.



Image by Romain Vignes via Unsplash

# Resource texts

- Want some inspiration? View the sample articles!

FSP011 Canvas page → Modules →  
Reading guide & **sample articles**

- These samples focus on different analytical methods
- You may choose a topic that differs from these – the samples give you some ideas but should NOT confine your choice

⋮	▼ Reading guide & sample articles	
⋮	📎 Questions to guide your reading.pdf	
⋮	Sample articles	
⋮	📎 Atomic spectrometry update - a review of advances in environmental analysis.pdf	
⋮	📎 Environmental chemistry in the 21st century.pdf	
⋮	📎 Microplastics in the Marine Environment - review analysis methods.pdf	
⋮	📎 Paper based environmental chemical analysis .pdf	
⋮	📎 PBDE analysis seafood.pdf	
⋮	📎 Prospects for combining chemical and biological methods for integrated environmental assessment.pdf	
⋮	📎 Silver nanoparticles in the environment- Sources, detection and ecotoxicology.pdf	

# Resource activity

- Use the “Questions to guide your reading” resource on Canvas

FSP011 Canvas page → Modules →  
**Reading guide** & sample articles

- It is a *guide*, not an assignment
- The questions will help you to investigate texts
- Not all questions will be applicable to all texts

## Help with your reading of scientific texts, guided by questions

Some of the following questions will be difficult or irrelevant depending on the text, and your purposes in reading. Use these as a guide for digging deeper into the text, letting them be flexible guides to how you analyze the texts.

### The first skim read:

Browse the article quickly:

- What does it seem to be about?
- Are there any broad details that give us an indication of what it's about (e.g. title(s)? Headings? Visuals? Labels?)
- What kind of article does it seem to be?

### The first thorough read

Read the **abstract** first and think about these issues:

- What have they done? ('strengths')
- What did they want to do? (remember news value?)
- What did they need to do? ('weaknesses')
- What claim(s) do they make?
- How do they support that claim / those claims?
- What are the shared assumptions (explicit / implicit)

Normally, this gives you a vantage point from which to read (most likely re-read) the rest of the article with a greater sense of direction. Of course, how much you are able to infer from the abstract depends very much on the article/abstract itself.

#### On reading the **introduction**:

- What claims are made and how are they supported?
- What assumptions are made (explicit / implicit; readers / industry)?
- What are the reasons for doing this research (explicit / implicit)?
- Where does the introduction end?

#### On reading the **main body**:

- What claims (if any) are made and how are they supported?
- Do the claims make an argumentative chain? Do they need to?
- What generalizations are made?
- What assumptions are made (explicit / implicit; readers / equipment / conditions)?
- How have they performed the study?
- What is vague and what is specific?
- What do they not say?

#### On reading the **conclusion**:

- What claims are made and how are they supported?
- What have they done? ('strengths')
- What did they want to do?
- What did they need to do? ('weaknesses')

# Resource activity: clarification

- These terms appear in the information for conducting a “second read” of a text.
- **Warrant**: an assumption that ties evidence to a claim. For example:
  - **Evidence**: you hear barking and howling nearby
  - **Warrant**: dogs are animals that bark and howl
  - **Claim**: there are dogs nearby
- **Qualifications**: words/phrases that limit meaning or indicate scope. For example:
  - Cardiopulmonary mortality is high near highways.
  - Cardiopulmonary mortality in old age tends to be high near highways in urban areas.

## Thesecond read (digging even deeper!):

Note: Before this stage, you will have already identified that ‘yes, this text is worth time/effort to explore further’; A second read would typically accomplish some of the following, and this approach to enhanced argumentative analysis is a practice that we will begin to look into.

- Conflicting statements
  - Are there statements made that jar with data, support, claims, or assumptions?
  - If so, what does this reveal?
- Conflicting claims
  - Are there claims made that jar with data, support, other claims, or assumptions?
  - If so, what does this reveal?
- Missing support
  - What statements go by unsupported or unsubstantiated?
  - Is there a reason for not including support?
  - What statements need (more / better) support?
  - Is that possible to achieve?
- Questioning implicit **warrants / assumptions**
  - Are the assumptions made recognized assumptions in the field?
  - Are the same assumptions made consistently?
  - Are there conflicting assumptions?
- Evaluating the use and interpretation of data
  - In view of the experimental setup
  - In view of the claims made
  - In view of the context of introduction/conclusion
- Use of **qualifications**
  - What statements need qualifying?
  - What statements are strong?
  - What statements are weak?



# Teamwork and reading

- Check in frequently with your writing group
- You may be finding complementary **OR** conflicting ideas
- Knowing what your group members are reading can help you think differently about the topic
- You might want to reassign tasks to different team members or re-prioritize tasks based on what you find in your research

Image by Marvin Meyer via Unsplash

# A flexible plan for research/reading



- Your group likely should build in time for research later
- After you have all had a chance to get to know your topic better, you may develop new / different ideas
- Be ready to research those ideas (i.e. don't expect to be done with research at the outline stage)

Image by Debby Hudson via Unsplash



CHALMERS  
UNIVERSITY OF TECHNOLOGY

# Workshop: work on your outline

Images by Hans Reniers and Kailyn Baker via Unsplash



# Report-writing process

## Stage one

- Sign up to groups (same group for report AND for presentation)
- Decide on a topic and research it
- Write an outline and consult with a KBT241 instructor on its content

## Stage two

- Write a first draft, which will receive FSP011 instructor feedback
- Write a second draft, which will undergo mandatory peer review

## Stage three

- Receive feedback from opposition group after presentation
- Make final revisions and proofread report
- Submit final draft to be graded



Image by UX Indonesia via Unsplash

# How to approach the outline

- Look at the outline checklist provided (under “Report Writing” module, “Prewriting” section)

FSP011 Canvas page → Modules →  
“Report Writing” → “Prewriting”

- This gives you a clear sense of the contents of the outline

## Writing a report outline

This page does not contain a template, as all of the reports for this class will differ considerably in

- Help you write a strong report
- Help your instructors guide the writing your text even before you begin writing your report

Your group should use this checklist to ensure that all required aspects of the outline are included

Check when complete	Task
	<ul style="list-style-type: none"><li>• Contains the goal/aim of the report and/or a thesis statement that conveys the main purpose of the report</li></ul>
	<ul style="list-style-type: none"><li>• Contains a projected list of section headings, with brief bulleted lists of what you expect to include in each section (introduction and conclusion)</li></ul>
	<ul style="list-style-type: none"><li>◦ This should be created so that instructors (or anyone else) who reads the outline or motivates the goal/aim or thesis statement of the report</li></ul>
	<ul style="list-style-type: none"><li>• Indicates where you expect to place figures/tables, with a brief summary of what you expect to show</li></ul>
	<ul style="list-style-type: none"><li>• Contains a list of references that you anticipate using in the report</li></ul>

# What goes in the outline?

- An **overview** of what you expect to include in the report
  - We know this may change, but the information should give Per/Ann-Sofie enough information to know if your report has a good foundation
- A **plan** of who will complete the different tasks
  - Helps you fairly distribute the work
  - Allows everyone in the group to know what is expected of them

Check when complete	Task
	<ul style="list-style-type: none"> <li>• Contains the goal/aim of the report and/or a thesis statement that conveys the main idea of the report</li> </ul>
	<ul style="list-style-type: none"> <li>• Contains a projected list of section headings, with brief bulleted lists of what you expect each section to say (including the introduction and conclusion)               <ul style="list-style-type: none"> <li>◦ This should be created so that instructors (or anyone else) who reads the outline should understand how each section supports or motivates the goal/aim or thesis statement of the report</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• Indicates where you expect to place figures/tables, with a brief summary of what you expect the visuals to depict</li> </ul>
	<ul style="list-style-type: none"> <li>• Contains a list of references that you anticipate using in the report</li> </ul>
	<ul style="list-style-type: none"> <li>• Contains a plan of which writing group member is responsible for what task. Be sure to include:               <ul style="list-style-type: none"> <li>◦ Who will write which sections of the report</li> <li>◦ What topics/subtopics will be researched, and who is responsible for finding literature on each</li> <li>◦ Who will proofread what sections of the report</li> <li>◦ Who will edit the report for cohesion/coherence</li> <li>◦ Who will read the report for unity of language and style</li> <li>◦ Any other tasks delegated amongst the writing group members</li> </ul> </li> </ul>

# Questions?

Image: Jon Tyson via Unsplash



# Go, go go!

- Use this time to work
- What should you do? This depends on what your group has already done, but some ideas are:
  - Decide on a specific topic / scope
  - Decide which group members will handle which parts of the outline
  - Research topic through the Chalmers Library online searching tools, finding possible report sources
  - Sketch out ideas for different report sections
  - Formulate possible goal/aim statement or thesis statement for the report
- We will “wrap up” the session in the last 5 minutes of class



# Next steps

1. Continue researching for report, using Chalmers Library materials
  - Write while you read!
2. Assign group members tasks for report (see information about what is expected in the outline)

FSP011 Canvas page → Modules → Report writing module → “Prewriting” section

3. Review “typical report sections” in the Chalmers Writing Guide
4. **Bring your group’s outline to the 13 September session**

Image by Lucas Davies via Unsplash



**CHALMERS**  
UNIVERSITY OF TECHNOLOGY