

Foundations of Technical Writing

CEE Graduate Seminar

Presented by:

Shelly Halling, Senior Lecturer, Engineering Education

Melissa Scheaffer, Principal Lecturer, Engineering Education

February 23, 2023

Some Things to Consider:

- Writing is a process not an event
- Writing can be an overwhelming process
- Writing is tedious and takes time
- The best writers seek help
- You are not alone

Elements of Effective Writing: Sentence Construction

Each sentence should:

- contain a subject, verb, and object
- be written clearly and concisely
- avoid ambiguous terms
- follow the technical writing standards
- contain correct punctuation
- flow smoothly from one sentence to the next

Elements of Effective Writing: Paragraph Construction

Each paragraph should:

- contain a clear topic sentence
- support the topic sentence
- be logically ordered in the document
- transition clearly to the next paragraph or section

Elements of Effective Writing:

Transitions

Transitions are the 'glue' that connects two related ideas and:

- create a smooth flow from one idea/paragraph to the next
- show time, make a comparison or contrast, demonstrate cause and effect, make a conclusion, show sequence, or demonstrate similarity

Common Transitional Words

however

furthermore

finally

accordingly

additionally

therefore

meanwhile

subsequently

otherwise

to illustrate

thus

moreover

consequently

first, second, third

in conclusion

Before You Write:

- Who is your audience?
- What is your purpose?
- What is your genre?

Who is Your Audience?

- How well do you know your audience?
- How much does your audience know about the subject?
- How much does my audience need to know about the subject?
- Why do they care and what will they do with the information?

What is Your Purpose?

- Why are you writing the document?
- What does your audience need to know?

What is Your Genre?

Genre considers what your audience will expect the document to do.



Elements of Genre

Genre is a **predictable pattern** of presenting information that serves both **format and function**.

Format: The visual design of the document (title page, table of contents, references)

Function: The set of topics the reader expects to find in the document (abstract, methods, results, etc.)

Key Elements of a Document: Abstract

The abstract is a summary of the document that:

- highlights key content
- identifies your research purpose
- discusses the relevance/importance of your work
- presents the main outcomes

Key Elements of a Document: Abstract

The abstract is a summary of the document that:

- highlights key content
- identifies your research purpose
- discusses the relevance/importance of your work
- presents the main outcomes

Key Elements of a Document: Body

- Introduction lays the groundwork
- Literature review identifies relevant research and outlines the state of knowledge of the subject
- Methods describe the techniques used to obtain the results
- Results present the raw data
- Discussion interprets the results, identifies what is new, and puts the results in context with the secondary research in the literature review.

Key Elements of a Document: Conclusion

- Summarizes the sections of the document and important results/conclusions
- Introduces no new information or insights