

Technical Writing Basics

Lecture 1

Technical writing

- **Technical writing** is a form of technical communication used in a variety of technical fields, such as computer hardware and software, engineering, chemistry, robotics, finance and consumer electronics.
- A **report** is any informational work (usually of writing, speech, television, or film) made with the specific intention of relaying information in a widely presentable form.

Types of Reports

- Reports are written for different purposes. They therefore contain different information and structures, including headings and subheadings, and these form the outline of the report.

Technical report

- A **technical report** (also: **scientific report**) is a document that describes the process, progress, or results of technical or scientific research or the state of a technical or scientific research problem.

Report Style

- There is no satisfactory explanation of style, no infallible (perfect) guide to good writing, no assurance that a person who thinks clearly will be able to write clearly .
- Diligent (careful) Study and Practice in writing .

Requirements of reports

Four general requirements must be met to produce good reports :

- **Clarity** (الوضوح)
- **Conciseness** (الإيجاز)
- **Continuity** (الإستمرارية)
- **Objectivity** (الموضوعية)

1. Clarity

- The purpose of a technical report is to transmit conclusions and their supporting evidence.
- *To do this:*
 - Your report must convey your exact meaning to the reader.
 - The text must be clear and unambiguous, mathematical symbols must be fully defined, and the figures and tables must be easily understood.

Clarity

- Clarity must be met from the readers' point of view:
 1. What may be clear to you as the author may not be clear to your readers. So You must continually reexamine your rough drafts with a reader's critical eye.

Clarity

2. Readers will not tolerate (bear/stand) confusion. They must never become uncertain about:

- * **What you are discussing**
- * **Why you are discussing it**
- * **What your plan of presentation is**

Clarity

Your **presentation** should be

- Logical
- Simple
- Systematic

2. Conciseness

**“Make your reports brief
but comprehensible”**

Conciseness

- Your story should be told with the fewest possible words and illustrations:
 1. Omit everything irrelevant to the results and conclusions.
 2. Don't be disappointed if a report that describes a lengthy program is only a few pages long: Report quality is often inversely (opposite) related to report length.
 3. Your readers are busy, so they will be interested in your conclusions and the supporting evidence and will want to get these as quickly as possible.

Conciseness

- **Do not condense reports at the expense of your readers' understanding :**
 1. Give enough information to enable them to understand clearly *what* you are describing and *why* you are describing it.
 2. Include enough background information to make the context clear. Do not assume that they will remember details of a previous report — or have even read it.
 3. Include all details needed to understand the current report.

3. Continuity

- **Reports should tell a complete story as logically and interestingly as possible. This requires :**
 1. Continuity between succeeding sentences, paragraphs, and sections and between the written text and the figures and tables.

Continuity

2. Using transitional words (and, nevertheless) phrases, sentences, or even paragraphs may be needed to lead your readers through the story. But overusing transitions can slow the pace of your narrative.

Continuity

3. Carefully choose the places at which you refer to figures and tables to limit distraction. Making these references at the beginning or end of a discussion is usually preferable.

Pace

- ❖ All writing has a pace .
- ❖ Sometimes slow, sometimes fast usually it is in between.
- ❖ A medium pace satisfies most technical writing.

If a pace is too slow, the reader will try to anticipate the writer and, consequently, may miss important bits of information.

If the pace is too fast , the reader will have to retrace (go back) his steps and slow down .

4. Objectivity

**“Write to *express*, not to
impress”**

- ***Be* honest**
- **Be tactful**

Objectivity

- **Be honest with your readers:**
 1. They will become suspicious if they detect hidden meanings or any type of subterfuge, and you will then have little chance of convincing them of your conclusions. They expect you to evaluate the data honestly.

Objectivity

2. Do not try to hide deficiencies in your research.
3. Tell your readers frankly (honestly) what your assumptions were, what your probable errors are, and what you may not understand about the results.

Objectivity

- **Be tactful (ذكي):**

1. If you are faced with the problem of presenting technical results that may conflict with previous results or with the personal prejudices of some readers, refrain (avoid) from making dogmatic التي تثبت بالرأي statements and avoid sounding egotistical (أنا) المغرور.

Objectivity

2. Your readers will be persuaded by facts, but they may become irritated از عا^ج if you attempt to impress them with your cleverness or to claim credit for accomplishments.

Examples:

Revise each sentence below to eliminate ambiguities (clarity) :

The benefits of this plan are hard to imagine.

Suggested Revisions

1. This plan offers countless benefits.
2. I can't imagine any benefits this plan might offer.

Examples

Revise each sentence below to eliminate ambiguities (clarity) :

Our division needs more effective writers.

Suggested Revisions

2. Our division needs more writers who are effective.

Our division needs writers who are more effective.

Examples:

In all writing, revision is required.

Suggested Revision

All writing requires revision.

Examples

**Revise the sentence as a concise, forceful,
and direct expression in the active voice:**

Our test results will be sent to you

Suggested Revision

We will send you our test results

Examples

The sentence below lacks proper emphasis because of active voice. Revise the ineffective active as an appropriate passive, to emphasize the recipient rather than the actor.

Jo's company fired her.

Suggested Revision

Jo has been fired.

Examples

Revise each wordy sentence below to eliminate needless phrases, redundancy, and needless repetition. (correctness)

She is a person who works hard.

Suggested Revision

She works hard.

Examples

It is essential that we act immediately.

Suggested Revision

We must act immediately.

Examples

Please make a decision today.

Suggested Revisions

Please decide today.

Examples

Revise each sentence below to eliminate useless jargon

Managers who make the grade are those who can take daily pressures.

Suggested Revisions

Successful managers are those who cope with daily pressures.

Examples

Which is the clearer sentence?

- A. *“The cause of our schools’ failure at teaching basic skills is not understanding the influence of cultural background on learning.”*
- B. *“Our schools have failed to teach basic skills because they do not understand how cultural backgrounds influence the way children learn.”*

Sentence B is clearer: why?

- Have failed is an action verb.
- Schools is a stronger subject than cause.

Examples

Revise the following sentence:(clarity)

- *Execute the program commands and the iteration steps must be repeated.*
- **Answer :**
- Execute the program commands and repeat the iteration steps.

Examples

Revise the sentence:

- Students' school gives conversation courses to them.

Suggested Revision (can be revised twice according to importance, i.e. do you want to focus on school or students? Emphasize on the object or subject according to the meaning you want to convey)

- 1- Students have been given conversation courses.
- 2- The school gives students conversation courses

Examples

Revise the following sentence:

- Select exit to close the application and disconnect from the network.
- **Suggested Revisions (this sentence has two meanings, hence not clear):**
 - 1- Select exit to close the application, and then disconnect from the network
 - 2- Select Exit to close the application and to disconnect from the network.

Examples

- **Revise the following sentence (Conciseness)**

Knowledge of how the variables are distributed is
not required **by** **beginner** **engineers**

Answer:

Beginner engineers do not need to know how the
variables are distributed

Examples

- **Revise the following sentence: (Conciseness)**

The different groups have to reach an agreement on how to make an adjustment of the figures.

Answer:

The different groups must agree on how to adjust the figures.

Examples

Revise the following:

- The job offers an attractive salary. It demands long work hours. Promotions are rapid.

Revised (add transitional word to achieve continuity) *(can be recombined (joined) in 2 ways):*

- Although the job demands long hours, it offers an attractive salary and rapid promotions. (recombined in a positive way)
- Although the job offers an attractive salary and rapid promotions, the working hours are long. . (recombined in a negative way)

Examples

- **Read these two paragraphs:**

Use strong passwords that combine upper- and lowercase letters, numbers, and symbols. Weak passwords don't mix these elements. Strong password: Y6dh!et5. Weak password: House27. Use a strong password that you can remember so that you don't have to write it down.

There are two basic types of graphics that you can use to enhance your Microsoft Word documents: drawing objects and pictures. Drawing objects include AutoShapes, diagrams, curves, lines, and WordArt drawing objects. These objects are part of your Word document. Use the Drawing toolbar to change and enhance these objects with colors, patterns, borders, and other effects.

Examples

In the previous example:

- Check continuity between sentences in the first paragraph , there are no transitional words that link between them!
- Check continuity between paragraphs, notice that the first paragraph speaks about passwords, and the second speaks about graphics in word; and there is no relationships between both paragraph, and even no link!

Examples

- **Revise the sentence (force)**

Education enables us to recognize excellence in our job and to achieve it

Suggested Revision (eliminate useless words, embalmed abstraction like job)

Education enables us to recognize and achieve excellence

Examples

- **Revise each wordy sentence below to eliminate needless phrases, redundancy, and needless repetition. (correctness, force)**

- This function is most important function in our code.

Suggested Revision

- This is the most important function in our code.

Examples

- **Revise the following**

We are aware of the fact that the correctness will not be 100%.

- **Suggested Revision** (remove embalmed abstraction)

Correctness is not expected to be 100%

or

Correctness will not be 100%