Style in Technical Writing

- The word technical can be defined as

- *"something having to do with practical, industrial, or mechanical arts or applied sciences"*

- Writing style can be defined in this way:

- *The features of one's writing that show its individuality- separating it from the writing of others and shaping it to fit the needs of particular situations. Style results from the **conscious and subconscious decisions** each writer makes in matters like **word choice, word order, sentence length, and active and passive voice**. These decisions are different from the "right and wrong" matters of grammar and mechanics. Instead, they comprise choices writers make in deciding how to transmit ideas.*

- Technical style is the way you write when you deal with a scientific or technical subject.

- The following adjectives show a few examples of types of tones or attitude that can be reflected in your writing:
- 1. casual tone   email to colleagues working on the same project
- 2. objective tone   formal report to a client
- 3. persuasive tone   formal proposal to a client
- 4. enthusiastic tone   recommendation letter to a university
- 5. Serious tone   memorandum to employees to close an office
- 6. authoritative tone   memo to an employee to reprimand him or her for violation of a policy
- 7. friendly tone   letter to long-term clients for invitation to an open house

1. Language

- 1.1 Formal English
- 1.2 simplicity
- 1.3 objectivity
- 1.4 direct language
- 1.4.1 conciseness
- 1.5 concreteness
- 1.6 simple terms
- 1.7 action verbs

1. Language-Formal English

- Use standard language. Do not write:
- Colloquial expressions (local or regional expressions)

Examples: *wanna* for *want to*; *be blue* for *to be sad*; *go nuts* for *go insane*

- Jargon or slangs (used by a particular group of people in a specialized field)

Jargons: bit, load, save, ROM, RAM

Slangs: *hang on* for *wait*; *run* for *computer simulation*

- Clichés

Examples: *bite the bullet* for *sacrifice*; *can of worms* for *to examine or attempt to solve some problem, only to inadvertently complicate it and create even more trouble.*

- Sexist language- being gender friendly. Use plurals or simple say he or she.

Formal English-exercise

- You guys should all be concerned about the issue.
- Each manger has an assigned place – he should park his car….
- Each customer will have change noted on his bill
- He has a lot of reasons for justifying his actions.
- This ain't working."
- "Do you got an extra pen?
- "It is kind of cold outside
- "Is everyone ok?
- The little kids who go to the local day care center are totally cool to be around. It's awesome to see how things that would seem gross or weird to guys in the dorm seem perfectly okay to them.

Language- Simplicity

➡ Technical style demands formal yet simple language.

➡ Use technical words only when you really need to.

➡ Avoid unnecessary jargon and gobbledygook. Gobbledygook refers to unintelligible, pompous, and stiff language.

Jargonized and pompous language	Simple and formal
We will use the input of each department to finalize our game plan.	We will consider the suggestions of each department to complete our programming.
At this juncture, the aforementioned procedure should be utilized.	The plan which we discussed should be used now.
We should commence operational capabilities in systematic increments.	We should begin the project step by step.
It just isn't politically correct to suggest a purchase from a company that is played.	It just isn't smart to suggest a purchase from a company whose sales are failing.

Computer Jargon:

Queue

Export

Bandwidth

Simple and formal

List of document waiting to be printed

Transfer data from one program to another

Internet capacity

Language: objectivity

- The technical style is characterized by objectivity and impersonality.

- Personal, subjective, emotionally stimulating and judgmental style and tone is not used to eliminate the possibility of multiple interpretations.

- Objectivity establishes credibility in your writing. Objective writing is writing that presents the facts and does not pass judgments or give opinions.

- Usually to achieve an objective and impersonal style, the passive voice and the third person point of view is adopted in scientific writing. However, there are places where the passive and the third person point of view will be unnecessary.

- The style of academic writing is objective and impersonal, which means that it avoids mentioning personal feelings. In order to express your point of view and still write in an objective style, you can use some of the following language strategies:

- Move information around in the sentence to emphasise things and ideas, instead of people and feelings. For example, instead of writing "I believe the model is valid, based on these findings", write "These findings indicate that the model is valid" or "The following section will show how the model is validated by the findings".

- Avoid evaluative words which are based on non-technical judgements and feelings, such as "badly", "disappointment", "amazing", etc. Instead use technical evaluations which related to academic or discipline-specific criteria and values - such as "valid", "inaccurate", "reliable", "clearly demonstrates", "rigour", "outdated", etc

- ➡ <u>Avoid intense or emotional evaluative language</u>. Instead, use more moderate and graded evaluative language. For example, instead of writing "Parents who smoke are obviously abusing their children", write "Second hand smoke has some harmful effects on children's health."

- ➡ <u>Use modality to show caution about your views</u>, or to allow room for others to disagree. For example, instead of writing "I think second-hand smoke causes cancer", write "Second-hand smoke may cause cancer", or "There is evidence to support the possibility that second-hand smoke increases the risk of cancer."

- ➡ <u>Find authoritative sources</u> (i.e. authors or researchers in books or articles) who support your point of view, and refer to them in your writing. For example, instead of writing "Language is, in my view, clearly something social", write "As Halliday (1973) shows, language is intrinsically social."

Language: Objectivity

- Subjective

- *The food at that restaurant is terrible.*

- *EXAMPLES OF SUBJECTIVE WRITING:*
  1. Editorial Writing
  2. Diary
  3. Magazine

- Objective

- *That restaurant gets bad reviews.*

- *EXAMPLES OF OBJECTIVE WRITINGS:*
  1. News
  2. Encyclopedia
  3. Gazette

► **Personal**

After studying the advantages and disadvantages of using prize incentives, I conclude your company should not offer them to your customers. You would have to pay out money for the prizes. And you might have to hire additional employees to handle the initial increase in sales volumes

► **Impersonal**

A study of advantages and disadvantages of using prize incentives leads to the conclusion that Mills Company should not offer prizes to its customers. The prizes cost extra money. Furthermore, the initial increase in sales volume might require the hiring of additional employees.

Rewrite the following text using an impersonal style of writing.

I want to argue that all children in Australia have the right to be educated in their mother tongue. I expect that many children in the past spent months or years in school but did not understand the lessons. I am convinced that many migrant children are failing in our education system because we do not have bilingual education programmes. If we look at the U.N. report on language and education, we can discover that children who become literate in their own language have the greatest chance of educational success. People have been discussing the latest figures on university entrance recently and you can tell that migrant children do less well than "Anglo" children at present. I suspect that this is because they have difficulty with English and I would claim that the government has done too little to help these children. Surely the best way to achieve this in Australia is for the State governments to set up bilingual education programmes for all migrant children. I would suggest that this is the number one important issue for multicultural Australia.

Language: Direct Language- conciseness

- Technical writing is meant to be useful. The longer a document is, the more difficult it gets to use.

- Conciseness is saying what you want to say in fewest possible words without sacrificing important information.

- A concise message is complete without being wordy.

Conciseness

- Read the following paragraph, taken from an actual business correspondence:

- *"In order to facilitate an efficient meeting and fuel thought processes prior to June 25, I want to provide you with a brief overview of discussions recently carried out at the director and manager level within the process. These discussions involved personnel from Accounts Payable, Information Services, Procurement/ Materials Management, Financial Systems, and Property Accounting, centering on a proposed framework for managing process improvement moving forward."*

Conciseness

➥ Conciseness can be achieved at two levels:

➢ Limit paragraph length

➢ Limit word and sentence length

Conciseness

➡ **Conciseness achieved through short words**

Long Words	Short Words
cognizant	know
endeavor	try
domicile	home
morbidity	death
terminate	end

conciseness

- **Shun words**

- One way to write more concisely is to avoid shun words- words ending in –tion or –sion.

Shun words	Concise versions
Came to the conclusion	Concluded (or decided)
With the exception of	Except for
Make revisions	Revise
Consider implementation	Implement

Conciseness

- **camouflaged words**

- Camouflaged words are similar to shun words. In both instances, a key word is buried in the middle of surrounding words (usually helper verbs, or unneeded prepositions).

Camouflaged words	Concise versions
Make an amendment to	Amend
Make an adjustment of	Adjust
Have a meeting	Meet
Thanking you in advance	Thank you
For the purpose of discussing	discuss

Exercise:
Change the following long words to shorter words:

Long Word	Short Word
Utilize	
Anticipate	
Cooperate	
Indicate	
Initially	
presently	
Prohibit	
inconvenience	

Exercise:

Change the following long words to shorter words:

Long Word	Short Word
Utilize	use
Anticipate	wait
Cooperate	help
Indicate	show
Initially	first
presently	now
Prohibit	stop
inconvenience	problem

Conciseness

- **<u>Conciseness achieved through short sentences</u>**

- You can shorten a sentence by avoiding:
  - Redundancy
  - prepositional phrases
  - passive voice
  - expletive pattern

Conciseness

- **Avoiding redundancy**

Wordy Sentence	Less Wordy Sentence
We collaborated together on the projects.	We collaborated on the project.
This is a brand new innovation.	This is an innovation.
The other alternative is to eat soup.	The alternative is to eat soup.

REDUNDANT EXPRESSIONS

- ➢ **Assemble together**
- ➢ **Carbon copy**
- ➢ **Each and every**
- ➢ **Necessary requirement**
- ➢ **Other alternative**
- ➢ **Totally necessary**
- ➢ **Postpone until later**
- ➢ **First and foremost**

Wordy

- For the summer social she bought a dress that was yellow in color. I'm not sure what the end result of the meetings will be.

- Concise

- For the summer social she bought a yellow dress. I'm not sure what the result of the meetings will be.

Conciseness

- **Avoiding prepositional phrases**

- Prepositional phrases create wordy sentences. Consider the following examples (note that the prepositional phrase is in bold type):

Wordy Sentence	Concise Sentence
I will see you *in the near future*.	I will see you soon.
I am *in receipt of* your e-mail message requesting an increase in pay.	I received your e-mail message requesting a pay raise.
He drove *at a rapid rate*.	He drove rapidly.

Change the following long phrases to one word

Long Phrase	One Word
In the event that	
At this point in time	
With regard to	
In the first place	
Is of the opinion that	
Due to the fact that	
Make revisions	
Take into consideration	
With the exception of	
Make an adjustment of	

Change the following long phrases to one word

Long Phrase	One Word
In the event that	if
At this point in time	now
With regard to	regarding or about
In the first place	first
Is of the opinion that	thinks
Due to the fact that	because
Make revisions	revise
Take into consideration	consider
With the exception of	except
Make an adjustment of	adjust or fix

CONCISENESS

- **<u>Avoiding passive voice</u>**

- Passive voice constructions are weak for at least two reasons. They are wordy, and they replace strong verbs with weak verbs.

Passive Voice	Active Voice
It is my decision to run for office.	I decided to run for office.
The gathering clouds are emphasized by the artist, but the approaching storm does not seem to be noticed by the children. (21 words)	The artist emphasizes the gathering clouds, but the children do not seem to notice the approaching storm. (17 words)
The computer was purchased by Tom.	Tom purchased the computer

CONCISENESS

- **<u>Expletive pattern</u>**
- Another way to write concisely is to avoid the following expletives:
- ➢ There is, are, was, were, will be
- ➢ It is, was

- Example: *There are three people who will work for Acme.*
- Revised: *Three people will work for Acme.*

Revise the following long sentences, making them shorter.

1. I will be calling you on May 31 to see if you have any questions at that time.

2. If I can be of any assistance to you in the evaluation of this proposal, please feel free to give me a call.

3. The company is in the process of trying to cut the cost of expenditures relating to the waste of unused office supplies.

4. I am of the opinion that Acme employees have too much work to do.

5. In the month of July, my family will make a visit to the state of Arkansas.

6. It is the company's plan to take action to avoid problems with hazardous waste.

7. On two different occasions, the manager of personnel met with at least several different employees to ascertain whether or not they were in agreement with the company's policies regarding overtime.

Language: Negatives

- In technical writing, it is preferred to use the positive form of declarations, directions, and instructions.

- Do not include…….exclude

- Do not permit………forbid

- The system shall not permit access to unauthorized users …… the system shall permit access only to authorized users.

Language: Concreteness

- **Use specific facts and figures**
- It is desirable to be precise and concrete in both written and oral communication.

Vague, general, indefinite Student GMAT score are higher.	Concrete, Precise In 1996, the GMAT score averaged 600; by 1997 they had risen to 610.

Concreteness

� **Choose vivid, image building words**

➤ Business and scientific writing uses less figurative language than does the world of fiction.

Bland image This is a long letter.	More vivid images This letter is three times as long as you said it would.

Which of the following are general and which are concrete?

➢ Heavy precipitation during the period

➢ Excessive heat

➢ Four inches of rain in 48 hours

➢ 120 degrees Fahrenheit

➢ Select the appropriate key

➢ Click Alt-B

➤ Exercise on page# 25

2. Create Text Flow

- 2.1 coherent paragraphs: single topic/focus, logical order, key topic in the beginning of a sentence

- 2.2 transitional words: time order, time position, sequence, conclusions, causality, compare/contrast, spatial concerns

- 2.3 sentence variety

- 2.4 acronyms and initialism

3. Clarity

- The most important criteria for effective technical writing is clarity.
- Technical document must convey a single meaning that the reader can understand.
- Unclear technical writing is expensive.
- Unclear technical writing can be dangerous e.g. unclear instruction on how to operate machinery.

CLARITY

- It can be achieved by following the given suggestions:
- i. **provide specific detail**
- Supply specific, quantified information rather using vague, abstract adjectives and adverbs.
- *Our latest attempt at molding preform protectors has led to some positive results. We spent several hours in Dept. 15 typing different machine settings and techniques. Several good parts were molded using two different sheet thicknesses. Here's summary of the findings.*
- *First, we tried the thick sheet material. At 240 F, this thickness worked well.*
- *Next, we tried the thinner sheet material. The thinner material is less forgiving, but after a few adjustments we were making good parts. Still, the thin material caused the most handling problems.*

- During the week of 10/4/14, we spent approximately 12 hours in Dept. 15 trying different machine settings, techniques, and thicknesses to mold preform mold protectors. Here is a report on our findings.

- **0.030″ Thick sheet**

- At 240 F, this thickness worked well.

- **0.015″thick sheet**

- This material is less forgiving, but after decreasing the heat to 200F, we could produce good parts. Still, material at 0.015″causes handling problems.

ii. **Answer the questions**

- A second way to write clearly is to answer the reporter's questions-who, what, when, where, why, and how.

- This flawed memo, written by a manager to a newly hired employee, highlights the importance of clarity.

- *Date: March 5, 2004*

- *To: Michelle Fields*

- *From: Earl Eddings*

- *Subject: Meeting*

- *Please plan to prepare a presentation on sales. Make sure the information is very detailed. Thanks.*

Reporter's Questions Checklist

▶ **Who** is the audience? Who will know what? Will the audience know a great deal (High Tech)? Will the audience know a little about the topic (Low Tech)? Will the audience know nothing about the topic (Lay)?

▶ **What** do you plan to do? What do you want the audience to do? What do you want to know?

▶ **When** should the job be completed? What's the turnaround time? What's the timetable? What's the desired schedule? When do you need an answer?

▶ **Where** will the work take place?

▶ **Why** is the task being undertaken (the rationale, motivation, goal)? Why is the desired date important?

▶ **How** should the task be performed? What's the preferred procedure?

REVISED VERSION

- Date: March 5, 2004

- To: Michelle Fields

- From: Earl Eddings

- Subject: Sales Staff Meeting

- Please make a presentation on improved sales techniques for our sales staff. This meeting is planned for March 18, 2004, in Conference Room C, from 8:00 a.m. - 5:00 p.m.

- Our quarterly sales are down 27%. Thus, we need to help our staff accomplish the following: 1. Make new contacts. 2. Close deals more effectively. 3. Earn a 40% profit margin on all sales.

- Use our new multimedia presentation system to make your presentation. With your help, I know our company can get back on track.

iii.Use familiar and easily understandable words

Obscure words	Alternative words
accede	agree
subsequent	later
In as much as	because
ascertain	Find out
cognizant	know
remittance	pay
supersede	replace

Prefer the familiar words to the unfamiliar words

- The conclusion ascertained from a perusal of the pertinent data is that a lucrative market exists for the product

- The acquainted mechanisms were utilized for the experimentation.

- Company operations for the preceding accounting period terminated with a substantial deficit.

- The data studied show the product is in good demand

- The old machines were used for the test

- The company lost much more money this year.

Try your Skill

Revise these sentences using simpler language.

1. You may encounter difficulties in terminating the contract.

2. As stipulated, we extrapolated the budget figures for two years.

➡ *You may encounter difficulties in terminating the contract.*

You may meet difficulties in ending the contract.

➡ *As stipulated, we extrapolated the budget figures for two years.*

As required, we projected the budget figures for two years.

➡ Exercise on page #31

iv.place the main point near the beginning

The reader usually wants the most important information first.

Original: *After reviewing the growth of the Cleveland office, it was decided by the corporate staff that an additional lab should be constructed at the Cleveland location.*

Revision: *The corporate staff decided to build a new lab in Cleveland after reviewing the growth of the office there.*

5. Simplicity

- The technical style demands formal yet simple language.

- Use technical words only when you really need to.

- Avoid unnecessary jargon and gobbledygook. Gobbledygook refers to unintelligible, pompous, and stiff language.

6. Accuracy

- Effective technical writing must be correct, whether grammatically, mathematically, electronically, etc.

- Accuracy has three main aspects:

  ➢ Document accuracy

  ➢ Stylistic accuracy

  ➢ Technical accuracy

7. Organization

- You should order that information on the page logically, allowing your readers to follow your train of thoughts. There are five patterns of organization that you can use to help clarify content.

- i. spatial

- ii. chronological

- Iii. importance

- Iv. comparision/contrast

- V. problem/ solution

Spatial

- *At the basement's north wall, I will build a window seat 7' long by 2' wide by 2' high. To the right of this seat, on the east wall, I will build a desk 4' high by 5' long by 3' wide. On the south wall, to the left of the door, I will build an entertainment unit the height of the wall including four, 4' high by 4' wide by 2' deep shelving compartments. The west wall will contain no built-ins. You can use this space to display pictures and to place furniture.*

Chronological

- *At 1:15 p.m., we arrived at the site and assessed the patient's condition, taking vitals (pulse, respiration, etc.). At 1:17 p.m. after stabilizing the patient, we contacted the hospital and relayed the vitals. By 1:20 p.m., the patient was on an IV drip and en route to the hospital. Our vehicle arrived at the hospital at 1:35 p.m. and hospital staff took over the patient's care.*

Importance

The following agenda is incorrectly organized:	A better list would be organized by importance, as follows:
Miscellaneous ideas Questions from the audience Refreshments Location, date, and time Subject matter Guest speakers	Subject matter Guest speakers Location, date, and time Refreshments Questions from the audience Miscellaneous ideas

Comparison/contrast

item	feature	Cost
The Broadmoor	4 bedrooms, 3 ½ baths 2-car garage Fully equipped kitchen	$200,000
The Aspen	4 bedrooms, 3 ½ baths Finished basement 3-car garage Fully equipped kitchen	$240,000
The Regency	4 bedrooms, 3 ½ baths Patio desk Finished basement with ½ baths Finished basement with ½ bath 3-car garage Fully equipped kitchen	$280,000

Problem/solution

➤ Note how the following summary from a proposal is organized according to problem/solution.

➤ *Your city' 20 year old wastewater treatment plant does not meet EPA requirements for toxic waste removal or ozone depletion regulations. This endangers your community and lessens property values in its neighbourhoods.*

➤ *Anderson and sons Engineering Company has a national reputation for upgrading wastewater treatment plants. Our staff of qualified engineers will work in partnership with city's planning commission to modernize your facilities and protect your community's values.*

Exercise

- Using spatial organization, write a paragraph describing your classroom or any room in your house.

- Organizing your text chronologically, write a report documenting your drive to university, or your activities at a sporting event.