NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

Revised Edition

HW0188

Effective Communication

Student's Course Guide

AY 2020/2021

LANGUAGE AND COMMUNICATION CENTRE
NANYANG TECHNOLOGICAL UNIVERSITY

HW0188 Effective Communication

This is the revised edition of the coursebook for a one-semester, 2-credit, course that aims to enhance students' abilities in academic communication as well as in professional communication. Professionals need to be able to communicate their expertise and knowledge, both to their colleagues at workplace and to the wider community. This coursebook is designed specifically to help improve students' skills in both areas of communication.

Please note: As HW0001 Introduction to Academic Communication is a co-requisite/pre-requisite for this course, please ensure that you have completed the course, signed up for it this semester or obtained exemption from this requirement.

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Course description

Introduction

HW0188 Effective Communication is a one-semester, 2-credit, course for students at Nanyang Technological University (NTU). Please note that HW0001 Introduction to Academic Communication is a co-requisite of this course. You should ensure that you have completed the course or signed up for it this semester or have obtained exemption from this requirement.

HW0188 aims to enable students to recognise and use an appropriate style of communication in both academic and professional settings. In this course, you will learn how to communicate to technical and non-technical audiences; how to use different writing techniques, how to write short reports, and how to make effective workplace presentations. You will also learn how to evaluate sources and how to incorporate these in your writing, through techniques such as paraphrasing, summarising, and quoting.

This ***Course Guide*** has been prepared to guide you in your studies. It contains important information on the course schedule and tutorial activities. Please read this guide carefully as it will help you to get the best out of your studies. If you have any questions related to the course, do not hesitate to discuss them with your tutor.

Microsite

This course also has a microsite that is on NTULearn. Please watch the videos for each unit and complete the exercises **before** coming to class. These videos and exercises will help prepare you for the tutorial activities.

Learning objectives

The objectives of this course are to enable students to master the important elements of effective communication, including:

1. basic academic literacy skills; and
2. key styles of written and spoken communication.

Learning outcomes

Upon successful completion of this course, you will be able to:

1. produce short academic texts relevant to the professional workplace;
2. write an audience-specific short l proposal and report; and
3. make professional presentations.

Course schedule

The schedule below sets out a week-by-week course plan. To optimise class time, you are encouraged to read the tutorial notes before attending class, as no reading time will be provided in class. Class time will be utilised for tutorial activities and group discussions.

Contents Unit 1

Week	Tutorial topic	Remarks
2	Introduction to effective communication	
3	Writing proposals	
4	Writing proposals (continued) Writing from sources: Evaluating, paraphrasing, summarising, and citing information	
5	Writing definitions, descriptions, and explanations	
6	Writing and presenting arguments	
7	Revising and editing Conferencing	Students submit draft of first assignment to Turnitin and bring one hard copy to class.
	Recess week	
8	Writing short reports	**Submission of Assignment 1** (Short proposal)
9	Writing short reports (continued)	
10	Preparing effective presentations	
11	Delivering effective presentations	**Submission of Assignment 2** (Short evaluation report)
12	In class presentations	**Assignment 3** (Oral presentation)
13	In class presentations (continued) Course review and feedback	**Assignment 3** (Oral presentation)

Although this course has 9 units, these are spread over 12 weeks, with Week 13 comprising a review of the course. The units have a common format consisting of: *Introduction*, *Learning outcomes*, *Content* (including input and activities), *List of references*, and *Appendix* (if necessary). In addition to the course materials, wherever appropriate, references to relevant books and articles dealing with topics in the individual units have been included.

Course assessment

There is no end-of-semester examination for this course; continual assessment will be used for student evaluation instead. This mode of assessment is particularly suited for communication courses as it takes into consideration the development of students' skills in written and oral communication through the semester. You will be assessed based on written assignments (55%), oral presentations (30%), and class participation (15%). The assignments will focus on the course objectives of achieving proficiency in writing reports and proposals; evaluating, incorporating and citing sources appropriately; and presenting arguments effectively.

The assignments are as follows:

55%: Written assignments

- There are **two** written assignments:
  1. **Proposal:** This is a paired assignment in which you and your partner write a short proposal offering a solution to a real-world problem from your workplace perspective. The proposed solution should be based on relevant technical concepts and/or current technology.
  2. **Report:** This is an individual assignment in which you write a short report evaluating a proposal.

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30%: Oral presentations
- In pairs, you will present the proposal you have written in Assignment 1.

15%: Class participation
- The tutorials will be conducted as workshops focusing on written and oral communication skills. To encourage you to participate actively in tutorials, you will be evaluated for the quality and quantity of your contributions to classroom tasks. The exercises that you complete from the microsite will also contribute towards this assessment.

The table below provides a detailed breakdown of the course assignments and weightings:

Assignment	Word Limit/Duration	Type	Weighting
Assignment 1: Short proposal	800 words	Paired	25%
Assignment 2: Short evaluation report	500 words	Individual	30%
Assignment 3: Oral presentation	5 minutes/presenter	Paired	30%
Class participation	Weeks 2 - 13	Individual	15%
Total			100%

The instructions and guidelines for each course assignment along with submission details are included in the ***Assignment folder*** in the main NTULearn course site. You are required to submit your written assignments through *Turnitin*, which is a plagiarism detection system. The assignments will be graded by your tutor and feedback will be provided to you periodically during the course of the semester.

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Unit 1

Introduction to effective communication

Introduction

Unit 1 of this course aims to give you an understanding of strategies of effective communication and the characteristics of technical communication.

Learning outcomes

After completing this unit, you should be able to:

1. describe key aspects of effective communication;
2. identify the main characteristics of technical communication; and
3. list a number of the common technical communication tasks of engineers.

Factors that contribute to effective communication

Communication can be a difficult task for a variety of reasons, including differences in the background and experience of people involved in the communication process. There are often cultural, linguistic and other barriers to effective communication. Factors in the physical environment may also present a challenge to effective communication. However, there are general guidelines that you can follow to achieve effective communication. The following two activities aim to get you thinking about what helps or hinders effective communication.

Activity 1.1
Sharing a personal communication experience

Individually, think of an incident in the past when you experienced a communication breakdown. This could be in any setting: at home, between you and a friend, written or spoken communication, or even in an online exchange. Tell the rest of the group what happened.

After everyone has shared his/her experience, pick the incident that the group thinks is most interesting and try to identify the causes of the breakdown. Discuss what could have been done to avert the situation. One person in the group will summarise the discussion for the class.

Activity 1.2
Identifying factors that facilitate effective communication

In this activity, we shall make use of what you have shared to identify 3-4 factors that facilitate effective communication.

Work as a group and write down your ideas in Table 1.1 below. Your ideas may be about the purpose of the communication or the needs of the audience, among other things.

Table 1.1 Factors facilitating effective communication

Now share your list with the class. Add to your own list ideas that others have brought up which you had not thought of. Your combined ideas may provide a common understanding of the key factors that underlie effective communication.

Characteristics of technical communication

Technical information is typically concerned with facts and evidence rather than beliefs and opinions. This information is mostly conveyed for practical reasons, rather than for contemplation or pleasure. Technical communication has its own special characteristics that distinguish it from other forms of communication. The next two activities ask you to consider what these characteristics are.

Activity 1.3
Discussing different types of texts

1. Read the following three passages quickly.
2. In your groups, discuss and jot down notes for each piece of writing in the table provided. Share your observations with the class.

Passage A

NEW ENERGY

Long live the lightbulb

Big government has made it better

By Michael Grunwald

Have you seen the ad with the funeral for the incandescent lightbulb? As a lone bagpiper plays a dirge in the snow, the actor best known as that no-nonsense lieutenant from The Wire explains in his stentorian baritone that it's not a sad day, because Cree Inc.'s LED bulbs last 25 times as long and use 84% less energy. Then he places Edison's creation in an itty-bitty coffin and buries it for good.

But it's alive! Sort of. This month, Ohio-based Advanced Lighting Technologies is releasing the Vybrant 2x, a 21st century incandescent powered by nanotechnology. It lasts twice as long as an old-fashioned Edison bulb and uses 50% less energy. It's also just one-fourth the price of a Cree LED. Meanwhile, the top lighting manufacturers are all selling even cheaper incandescents that are not as efficient as Vybrants—much less LEDs—but use 25% less juice than older bulbs.

This might all sound confusing, because when Republicans denounce President Obama's tyrannical left-wing ways, they often cite his 'ban' on incandescent lightbulbs. Wasn't he consigning us to a green dystopia full of expensive, curlicued bulbs that leak mercury and won't dim? Wasn't the ban a classic

example, as House Energy and Commerce Committee chairman Fred Upton put it, of Big Government substituting its own judgment for the market's?

Source: http://business.time.com/2013/05/09/long-live-the-lightbulb/

Passage B

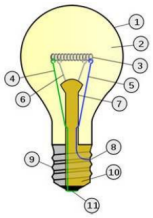
Incandescent light bulb

The incandescent light bulb or lamp is a source of electric light that works by incandescence, which is the emission of light caused by heating the filament. They are made in an extremely wide range of sizes, wattages, and voltages.

How do they work?

An incandescent bulb typically consists of a glass enclosure containing a tungsten filament. An electric current passes through the filament, heating it to a temperature that produces light. Incandescent light bulbs usually contain a stem or glass mount attached to the bulb's base which allows the electrical contacts to run through the envelope without gas/air leaks. Small wires embedded in the stem support the filament and/or its lead wires. The enclosing glass enclosure contains either a vacuum or an inert gas to preserve and protect the filament from evaporating.

Diagram showing the major parts of a modern incandescent light bulb.



1. Glass bulb
2. Inert gas
3. Tungsten filament
4. Contact wire (goes to foot)
5. Contact wire (goes to base)
6. Support wires
7. Glass mount/support
8. Base contact wire
9. Screw threads
10. Insulation
11. Electrical foot contact

Source: http://www.bulbs.com/learning/incandescent.aspx

Passage C

Inductively coupled incandescent light bulb

US 5905343 A

ABSTRACT

An incandescent bulb having a looped filament within an evacuated bulb containing a gas mixture including halogen employs magnetic means external to the bulb to provide inductive heating of the filament so that there are no connections passing through the bulb envelope. Alternative embodiments include a toroidal bulb wherein a second arm of the magnetic circuit passes normally through the center of the bulb toroid, alternating voltage excitation being supplied to a first arm of the magnetic circuit; and an elliptical bulb that is disposed between oppositely facing ends of a two-part second magnetic arm that is similarly excited. In a further embodiment, an additional arm of the magnetic circuit serves to form a non-uniform field in the vicinity of the filament, thereby providing a lift force against the force of gravity so as to minimise filament sagging.

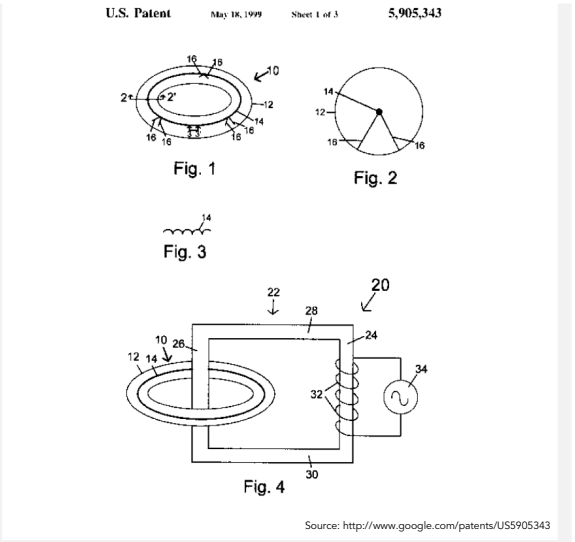

U.S. Patent May 18, 1999 Sheet 1 of 3 5,905,343

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Source: http://www.google.com/patents/US5905343

Table 1.2: Comparison of the three texts on the light bulb

	Passage A Long live the light bulb	Passage B Incandescent light bulb	Passage C Inductively coupled incandescent light bulb
What is the purpose of this text?			
What is the key message?			
What are the distinctive language features of this text?			

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Discussion:

1. Which of these texts is likely to have been written by an engineer?
2. Is the text you have identified targeted at a general or specialist audience? Give three reasons to support your opinion.
3. What does this text say about the training and writing style of engineers?
4. What factors affect the way engineers communicate, or are expected to communicate?

Activity 1.4

Identifying the characteristics of technical communication

Engineers think and act according to their training. Based on the discussion so far, identify 3-4 characteristics of engineering communication and list them below.

Table 1.3 Characteristics of technical communication

1.
2.
3.
4.

Do you think these characteristics are applicable to both written and spoken communication?

Technical communication tasks

Your ability to communicate technical information effectively to specialists as well as non-specialists will be of great value to you and your audience.

Activity 1.5

Identifying technical communication tasks

The following table shows some technical communication tasks that engineers perform. Match the task with the correct description in the second column.

Table 1.4: Technical communication tasks of engineers

Technical communication tasks			Description
Writing evaluation reports	•	•	Verbally communicating expository or persuasive information on engineering or scientific topics, often with the help of graphics to get the message across.
Writing lab reports	•	•	Providing updates on the development of a project.
Writing manuals	•	•	Describing procedures for how to act in a situation, assemble an item or operate equipment.
Writing proposals	•	•	Answering questions regarding performance, quality, and suitability of staff, equipment, services, policies and proposals.
Writing progress reports	•	•	Describing the details of a test or experiment.
Giving technical presentations	•	•	Outlining a solution to a problem in which the solution may be a course of action or a product.

Discussion:

Figure 1.1 shows the three most common types of written and spoken communication tasks of engineers based on a survey carried out in 2014 among employers who hired NTU's engineering graduates.

Figure 1.1: Three most common written and spoken communication tasks performed by NTU Engineering graduates at the workplace

Review the course outline of this course. What are the main topics covered? Why do you think these topics have been selected?

In view of the survey results, how can you plan to improve your own communication skills to prepare yourself for the engineering profession?

Activity 1.6
Analysing an engineering text

1. Read quickly the text below about a Bluetooth speaker.

1. The Bose SoundLink Mini II is a small Bluetooth speaker. 2. It isn't small enough that you'll carry it with you every day, and you're definitely not going to fit it in a pocket. 3. However, it's about as small as a speaker can get without compromising on sound quality. 4. And if you haven't heard one of these small sized, big output speakers before, you'll most certainly be impressed by how good the Bose SoundLink Mini II sounds. 5. Cheaper rivals are available, but if you're after powerful bass in a tiny box then the Bose SoundLink Mini II is worth its £169 asking price. 6. The Bose SoundLink Mini II looks and feels much the same as the first SoundLink Mini. 7. It's a lightly curved brick of aluminium, small enough to grasp easily in one hand, but it's too long and deep to fit in a pocket. 8. This doesn't rule it out as an ultra-portable speaker, though; you'll just need to put it in a rucksack. 9. It might also be worth investing in a Bose rubber cover for your speaker. 10. While the SoundLink Mini II feels superbly well-made and pretty tough, its aluminium outer shell will probably show up damage pretty readily. 11. Fresh out of the box, the Bose SoundLink Mini II is of the perfect size for "around the house" portability. 12. And for its charging dock it wins bonus points.

Adapted from Williams (2015)

2. What is the purpose of this text? Who might the target audience be?
3. Is the description of the Bluetooth speaker written with sufficient precision? Why do you think so?
4. If you were to re-write the physical description of the speaker (sentences 7-10), how would your draft look? Use the space below for your draft.

Summary

In this unit, you learnt about the main factors of effective communication as well as some key characteristics of engineering communication. You also learnt about some common technical communication tasks that engineers perform in their workplace.

Preparing for Unit 2

The next tutorial is on writing short proposals. Please read this unit beforehand as the tutorial will focus on classroom activities. There will be no class time for reading. Watch the video for Unit 2 and complete the answer sheet before coming to class.

References

Bulbs.com. (n.d.). *Incandescent bulbs*. Retrieved 10 May 2018 from http://www.bulbs.com/learning/incandescent.aspx

Grunwald, M. (2013). Long live the light bulb. *Time*. Retrieved 10 May 2018 from http://business.time.com/2013/05/09/long-live-the-lightbulb/

McCamant, A. J. (1995). Inductively coupled incandescent light bulb. Retrieved 10 May 2018 from http://www.google.com/patents/US5905343

Williams, A. (2015). Bose SoundLink Mini II review. Retrieved 10 May 2018 from http://www.trustedreviews.com/bose-soundlink-mini-ii-review

Please note that the **APA style** of referencing is used in this and subsequent units because it is one of the two common referencing styles used in the engineering schools in NTU. More information about referencing styles will be given in **Unit 3** and it is important that you familiarise yourself with the referencing style used in your school. The other common referencing style used in engineering schools, the IEEE referencing style, will be used in Engineering Communication (HW0288).

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Unit 2

Writing proposals

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Introduction

Proposals are important documents that offer persuasive solutions to problems. They may be written to convince the readers to adopt an idea, a product, or a service. A proposal has three main points:

1. an explanation of the proposed research or project (what will be done);
2. the methods to be employed (how it will be done); and
3. the novelty and/or importance of the study or project (why it should be done).

Proposals are generally categorised as formal or informal. Formal proposals are normally large, comprehensive documents produced by a team of experts on behalf of an organisation. They are usually prepared in response to a formal request for proposal (RFP). Informal proposals are generally short documents that typically address a limited problem for which a relatively straightforward solution exists.

Learning outcomes

After completing this unit, you should be able to:

1. identify the sections and organisational structure of a proposal;
2. identify the components of a proposal; and
3. write the background, problem and solution of a proposal.

Writing a proposal

What is a proposal?

Proposals, like reports, are written when there is a need to solve problems. A proposal is a type of persuasive document in which the writer typically proposes a plan, a programme, a product, or service to address a problem or issue. Through the use of evidence, logic, and persuasive language, the writer attempts to convince the recipient of the proposal to agree to what is being recommended.

Why write a proposal?

Large corporations receive proposals from departments within the corporation to start new programmes or make a large purchase. Researchers (including students) write proposals to have their projects approved and/or funded by their university or research body. A university's research team might use a research proposal to request funds. A student or group of students will write a proposal to have their research project approved. Often non-profit organizations, such as charities, write grant proposals asking a donor or funding agency to donate funds.

The aims of proposals

As an author of a proposal, you should persuade your audience that:

- a solution to their problem must involve or include goals you define;
- you are able to achieve those goals because you have:
  - a sound method,
  - the necessary facilities and equipment,
  - qualified personnel, and
  - a realistic schedule; and
- you are able to achieve those goals at a reasonable cost.

Contents of a proposal

Title
- Make the title concise, meaningful, and problem-centred.

Background
- This information is designed to provide the readers with necessary introductory information as they begin reading some of the ideas you have to offer. You might mention some basic facts or historical information about the subject of the proposal or highlight past research that is related to the proposal.

Problem
- Clearly define the problem and the need for the investigation. Why is the problem meaningful or relevant?

Solution
- Describe the project goals. Be specific in explaining how the solution addresses the problems/issues identified earlier.

Benefits
- Emphasise who will benefit from your solution and how.

Implementation
- Outline the method you will use to achieve your solution and any resources (e.g., facilities, equipment, software, personnel) that will be required. Include a timetable for completion if appropriate.

Costs or budget
- Outline the estimated cost of the resources needed.

Conclusion
- Restate the seriousness of the problem and emphasise why the proposed work is important. Reassert your selling points, and urge action.

Activity 2.1
Analysing proposal presentations

Video activity (blewmymindcom, 2013; Timing The Market com, 2017)

Watch the *Soundbender* and *Sunscreenr* presentations on *Shark Tank*, a US reality television show. As you watch the two presentations, take notes and answer the following questions.

Shark Tank Soundbender: https://www.youtube.com/watch?v=yt9stNaaG8c
Shark Tank Sunscreenr: https://www.youtube.com/watch?v=DAgfS57S5QM (22:16 to 31:11)

Table 2.1: Analysis of proposal presentations

1. What background information is provided?	
2. What is the problem presented?	
3. What are the benefits of the product?	
4. Which presenter is more convincing and why?	

Activity 2.2
Reorganising a written proposal

Identify the components of the proposal and arrange them in a logical sequence.

Assignment 1 – Proposal

a)_____

The proposed product, Stick It Right, aims to provide a non-invasive method of detecting blood alcohol level, which differs from the traditional breathalyser. It uses transdermal ethanol sensors that integrate it into a waterproof multi-coloured LED sticker to detect alcohol vapour emitted from the human skin [3]. Stick It Right, as shown in Figure 1, is small and lightweight, having a diameter of less than 30mm and weighing less than 30g. It is non-obstructive and can be attached anywhere. It has transdermal sensors that can detect alcohol vapour from the skin and sends a signal proportional to the alcohol concentration. The data logic circuit stores and processes the signal and then sends the corresponding data to an LED light powered by a 1.5v battery. If the users' blood alcohol level is less than the prescribed legal limit it will glow in green, near the legal limit of 60-80mg per 100ml of blood, it will glow in amber. If it hits above the limit it will glow in red. In addition, this product can be utilised such that the user can wait for the sticker to turn green to indicate that the blood alcohol level has subsided below the limit to drive home safely.

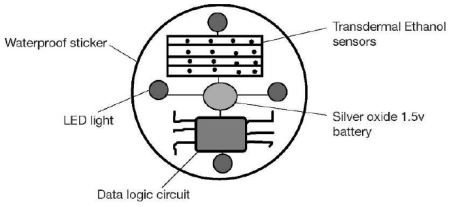

Figure 1: Stick It Right

b)_____
In producing this product we will require the following:

Collaborate with a research and development team specialising in the transdermal ethanol sensor field to work on integrating it onto the sticker.

Test the data logic circuit and signals.

Work with Electric Stick, a company that makes waterproof stickers.

c)_____
It is pretty normal for most people today to go out and have a few drinks once in a while with friends or work colleagues. Drinking alcohol can be such a big part of socialising that saying no can make you feel like you are left out, or not having as much fun. One serious consequence of this is drink driving which continues to be a serious issue. In Singapore there were an alarming 2330 cases of motorists charged for drink driving in 2013. In addition, there have been 88 cases of accidents due to drink driving and 16 fatalities in 2013 alone [1]. The physical, psychological, and emotional toll of a drink driving accident is enormous, and can have a profound impact on our lives. Therefore, this current issue should be looked into, to prevent further escalation in numbers.

d)_____
Stick It Right will benefit individuals who want to have a drink and keep their alcohol level below the legal limit to drive home safely. Users can also have a better self-awareness of their alcohol limit. It is more user–friendly than the current breathalyser as it is non-invasive. It will not require any specific instructions to use as the process of colour changing is automated.

e)_____
As stated by the Singapore Traffic Police, the legal limit in Singapore is a blood alcohol content of less than or equal to 80 milligrammes (mg) per 100 millilitres (ml) of blood or breath alcohol content of 35µg per 100ml of breath. Breathalysers are commonly used by the police to detect your blood alcohol content, but they can sometimes give inaccurate readings [2]. Breathalysers currently on the market can range in price from $50 to $150 and can be quite bulky and cumbersome to carry around. Some have a margin of error of 0.02% which is enough leeway to put you over the limit in certain situations. The problem that many people face when driving to parties, is that they would not want to commit an offence, hence limiting themselves to non-alcoholic drinks. Furthermore, parties normally end quite late making it difficult to find a taxi.

f)_____
The number of drink driving cases in 2013 is alarming. Stick It Right can reduce the number of drink driving cases and prevent fatalities resulting from it through the use of technology. This product will also enable self and peer awareness of an individual's blood alcohol level. It is important that we all play a role in reducing drink driving by making the right choice with Stick It Right.

g)_____

R&D:	$2000
Ethanol Sensors:	$42
LED lights:	$4
Waterproof stickers:	$4
Total Device prototype cost:	$2050

References

A. Lee. "Sharp spike in drinking-driving incidents this year", Today Online, December 3, 2013. [Online]. Available: http://www.todayonline.com/singa pore/sharp-spike-drink-driving-incidents-year [Accessed September 20, 2013].

C. Tyler. "Common items cause false positives on breathalyzers", ABC7 San Francisco. December 23, 2009. [Online]. Available: http://abc7news.com/ archive/7186641 [Accessed September 16, 2013].

G. Webster, H. Gabler, "Feasibility of Transdermal Ethanol sensing for the Detection of Intoxicated Drivers," Annual Proceedings/Association for the Advancement of Automotive Medicine, vol. 51, pp. 449-464. [Online]. Available: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3217504/ [Accessed September 16, 2013].

Adapted from Anon. (2015)

Approaches to writing	Plagiarism	Non-plagiarism
Including a photo from NTU's webpage in my presentation.	☐	☐
Using my own words to re-write a sentence and acknowledging the source.	☐	☐
Using summarised sentences from different sources in my Introduction section.	☐	☐

Note: Read through the NTU's plagiarism policy and be familiar with it. (http://www.ntu.edu.sg/ai/ ForStudents /Pages/index.aspx)

In order to write academic papers or reports, you need to read what other researchers have written in your areas of interest and incorporate relevant information into your own writing by paraphrasing, summarising or quoting what you have read.

Paraphrasing

Paraphrasing is primarily expressing what someone else has said or written using your own words. Paraphrasing information allows you to refer to the original ideas or texts using roughly the same number of words. You also need to include a reference to the author(s) when using paraphrased information in your assignments.

Paraphrasing requires multiple skills, specifically, reading critically and understanding the original texts, and then using your own words to restate the content of the original texts. With some guidelines and practice, you will be able to master this high level skill, which is essential in writing your academic papers, proposals and reports.

Instead of reading a list of guidelines for paraphrasing, a better way for you to understand how to paraphrase information properly is to watch a short video recording on paraphrasing ['Ethics and Plagiarism' by Dr Alvin Leong from the Language and Communication Centre, NTU, uploaded to the HW0188 NTULearn course site].

After you have watched the video, complete the following activity.

Activity 3.4
Writing guidelines for paraphrasing

Write down the three important steps as guidelines to follow when paraphrasing information.

Table 3.4: Guidelines for paraphrasing

1.
2.
3.

The guidelines you have written will help you to improve your general paraphrasing skills. However, you also need to paraphrase information accurately (please watch the video again regarding how you can paraphrase information accurately). Furthermore, you will need to pay special attention to your choice of word(s) and the grammar of the sentence(s) while paraphrasing. Your own words must have the same meanings as the original words so that you do not distort the intended meanings of the original words.

For example, if you need to paraphrase the sentence from the video '***Instructors should be careful in considering the effects that critical feedback may have on highly sensitive students***', you could use alternative words such as 'teachers' instead of 'instructors', 'mindful' instead of 'careful,' etc. After you have found the appropriate words to replace the original words, you will need to check if the grammar (i.e., tense, subject-verb agreement, and so on) of the sentence is acceptable.

After you have studied the guidelines from the video, you can now apply them to the following activity.

Activity 3.5
Paraphrasing a paragraph

Form a small group to paraphrase the following paragraph.

> This anti-theft device is a technologically-enhanced version of other current devices in the market. Users will definitely have a better sense of security when their belongings are left unattended as they will be alerted to the slightest disturbance to their belongings. Moreover, this product will be more user-friendly as compared to current devices, especially when complemented with the smartphone application interface. The application will allow customisation of the device settings to users' preferences, something which is lacking in the current market.
>
> Anon. (2014)

Summarising

Summarising is the ability to critically read original texts, and synthesise and construct concise and short versions of long articles and documents. It is a very important skill for students at university level. The major difference between paraphrasing and summarising is that when you paraphrase you can keep the same number of words as the original, but, when you summarise, the length of the text is reduced substantially. When summarising a paragraph or an article, you include only the main ideas and exclude details or other supporting evidence. Often examples, illustrations and minor ideas are not included when you summarise original ideas.

It is worth noting that summarising does not mean simply reducing a text arbitrarily and making it short. Like paraphrasing, it involves choosing appropriate words/phrases to replace the original words/phrases, re-organising sentences, and paying attention to grammar.

The following are basic summarising strategies for you to follow:

- Read critically to understand the ideas and highlight the main idea(s).
- Select important information to be included for readers to understand the main idea(s). How much detail is needed actually depends on how much the readers know about the topic.
- Highlight all the key words and phrases.

- Use your own words to write sentences based on the highlighted key words and phrases and keep the original ideas.
- Exclude specific examples or additional information.
- Revise and edit for coherence and logical development of ideas as well as grammatical accuracy.

As with paraphrasing, you should also pay attention to the use of language when summarising.

You can follow the above guidelines to see how the following passage is summarised accurately and in the fewest words.

> Passengers shuttling between Nanyang Technological University (NTU) and JTC Corporation's (JTC) CleanTech Park could soon be travelling in Singapore's first clean and green driverless shuttle transportation system. In partnership with NTU as well as JTC and supported by the Singapore Economic Development Board (EDB), Induct Technologies has successfully manufactured an autonomous electric shuttle. It is expected to ply the two-kilometre route providing a safe, reliable and environmentally-friendly alternative mode of transportation. As part of NTU's drive to be at the forefront of electromobility research, the partnership will also see the testing of various new charging technologies such as wireless induction and new super capacitors for electrical vehicles. Software and intelligence systems will also be programmed for pre-defined routes operating between JTC's CleanTech One building and the NTU Yunnan Garden campus. This test-bed is the first of its kind in the region and could pave the way for the integration of autonomous vehicles into Singapore's transport system to alleviate the typical potential bottle neck problems faced by urban cities.
>
> Adapted from *NTULink* (2013), p. 25

After you have read the passage critically, you will realise that there are three main ideas from the passage and they are: (a) Singapore's first clean and driverless shuttle transportation system will soon be seen shuttling between NTU and JTC's CleanTech Park; (b) this autonomous electric shuttle is a collaboration between NTU, JTC and Induct Technologies; and (c) the collaboration is part of NTU's effort to lead the research in various new charging technologies and it is the first of its kind in the region, with potential to alleviate future problems faced by urban cities .

So a summary of the ideas in the above passage might read like this:

> NTU is going to test Singapore's first driverless vehicle on the roads. The collaboration between NTU, JTC and Induct Technologies showcases NTU's commitment to being the pioneer in developing and testing this new platform. Furthermore this initiative, Southeast Asia's first, could lead to autonomous vehicles offering a viable solution to the traffic woes of Singapore as well as other urbanised nations.

Direct quotations

A direct quotation means copying the original sentence/paragraph exactly, word for word. However, direct quotations are rarely used in technical writing.

As a general rule, if you are quoting just a sentence or less than two lines, you can just incorporate it into your own writing with quotation marks.

For example:

> Wong (2018) concluded that the rapid development of the water resources infrastructure 'marks the government's commitment to exploring multiple channels to guarantee Singapore's future water supply' (p. 276).

However, if you quote more than two lines, the quotation should start on a new line and be indented from the left margin with reduced font size and line spacing.

For example:

> This so called 'blue revolution' requires addressing a range of social, environmental, and economic issues, including water pollution, degradation of ecosystems and violation of labour standards.
>
> Islam et al. (2014), p. 28

When writing your papers or reports, you have to determine when and how much you want to quote directly.

Citing references to strengthen your arguments in writing

We have discussed the various ways of using ideas from the original texts, i.e., paraphrasing, summarising, and quoting directly. In this section, the emphasis is on different styles and formats of citing references within the text.

Making use of references or works published is an integral part of academic writing because it strengthens your arguments and also shows that you are aware of the contributions by others in the area you are writing about. It has been highlighted in the earlier sections that using ideas, expressions of ideas, or any other information (e.g., statistics, graphics, and sentences) from other sources without acknowledgment is regarded as plagiarism. In order to avoid committing plagiarism, you should cite the sources from which you obtained the original information. In the following section, we shall discuss the various ways of citing sources both within the main text itself (in-text citations) as well as in the final references list.

In-text citations

When you acknowledge sources within the text, you provide limited information about the source, choosing from options such as the author/date system and the number system. Detailed information such as the title of the journal or the book or the website address should be reserved for the final references list.

The **author/date system** refers to the style where the surname of the author(s) you are citing and the year of publication are clearly stated in the text. If the information is from a specific page of a book or paper, then the page number may be included as well.

For example:

> Soil gradually loses organic matter, becoming a compact, less microbial activity and unable to retain water and nutrients if only synthetic fertiliser is used (Wang, 2018, p. 2).
>
> Chan and Wang (2013) stated that the health of soil was important in nurturing the beauty of nature and providing good nutrients in the food that humans consume.

In the first example, the emphasis is on the information, so the author's name, the year of publication, and the specific page number are placed at the end of the sentence in parentheses. In the second example, the emphasis is on the authors. You should note that **past tense**, i.e., **'stated'** is used to reflect the accurate intentions of the authors. But in the first example, **the simple present tense**, i.e., **'loses'** is used because the emphasis is on the information.

The **number system** is widely used by engineers and scientists. When you use this system, you insert a number beside the cited text in square brackets, or in superscript. This number corresponds to the relevant entry in the references list at the end of your paper or report.

For example:

A few researchers recently have discussed and debated the issue of water pollution in the sea shore [1], [2], [7], [9].

The difference in experimental readings was due to the lowering of room temperature during the first phase of the experiment [2, p. 34].

If your readers want to know the details of the citations within the text, they can go to the final references list at the end of your paper or report.

Final references

You have probably noticed that in the previous section, when we discussed acknowledging sources, the focus was on citations within the text. If the author/date system is used, the details required when acknowledging sources are simply the authors' names, the year of publication and the page number if it is a book or journal article (e.g., Wong, 2014, p. 14). The other details such as the publisher and the title of the journal (or book) are excluded from the main text because these details are listed in the references at the end of the paper or report.

There are many different styles in listing references. Some authors use the referencing guidelines of the *American Psychological Association* (APA), whereas authors in the disciplines of computer engineering and electrical and electronic engineering follow the style stipulated by the *Institute of Electrical and Electronics Engineers* (IEEE). There are also other styles you may have come across, e.g., the *Council of Science Editors* (CSE) and the *Council of Biology Editors' Manual for Editors and Publishers*. The best practice would be to familiarise yourself with the commonly used styles but focus on the style used in your discipline.
Despite all the differences in referencing style, the general guideline is to include the following information in each full reference and be consistent throughout the entire references list:

- author(s)'s name;
- year of publication;
- title of journal/book;
- publisher/place of publication; and
- page number/volume number/issue number (for a journal article).

The following example is based on the style indicated in the publication manual of the American Psychological Association (APA). Detailed information about listing references in APA style can be found at:

Web resource: American Psychological Association (2014)
http://www.apastyle.org/learn/index.aspx?tab=2

References (APA)

Chou, R. J. (2013). Addressing watercourse sanitation in dense, water pollution-affected urban areas in Taiwan. *Environment & Urbanization, 25*(2), 523-540.

Schall, J. (2013). *Effective technical writing in the information age*. Retrieved 15 July 2014 from https://www.e-education.psu.edu/styleforstudents/c2.html.

Smith, J., & Thomson, A. (2014). *The polluted rivers*. Cambridge: Cambridge University Press.

Valur, D. H. (2004). Restructuring robots for new markets. In D. Collins & M. Bum (Eds.), *Market driven technology development* (pp. 115-131). Chichester, England: Wiley.

If you use the IEEE number system as discussed earlier, you need to ensure that your citation numbers in the main text correspond to those of the entries in the references list, which will not appear in an alphabetical order as in the above example. The following example is based on the IEEE referencing style. Detailed information about the IEEE citation reference format can be found at:

Web resource: IEEE Periodicals Transactions/Journals Department (2016)
http://ieee authorcenter.ieee.org/wp-content/uploads/IEEE_Style_ Manual.pdf

References (IEEE)

[1] J. Smith and A. Thomson, *The Polluted Rivers*. Cambridge: Cambridge University Press, 2014.

[2] R. J. Chou, "Addressing watercourse sanitation in dense, water pollution-affected urban areas in Taiwan," *Environment & Urbanization*, vol. 25, no. 2, pp. 523-540, 2013.

[3] D. H. Valur, "Restructuring robots for new markets," in *Market Driven Technology Development*, D. Collins and M. Bums, Eds. Chichester, England: Wiley, 2004, pp. 115-131.

[4] J. Schall. (2014, July). *Effective technical writing in the information age*. [Online] Available: https://www.e-education.psu.edu/styleforstudents/c2.html.

Activity 3.6
Comparing and contrasting: APA and IEEE referencing styles

In groups, discuss how the APA referencing style differs from the IEEE style.

Table 3.5: Comparison of APA and IEEE referencing styles

APA style		IEEE style
	VS	

Summary

In this unit, you have learnt how to critically assess information you read in various sources (e.g., books, journals, and the Internet) and to avoid plagiarising information in academic writing. You have also learnt how to paraphrase and summarise information as well as how to cite reliable information appropriately. Furthermore, you have familiarised yourself with citing a source in the text (in-text citation) and listing references in the final references list.

Preparing for Unit 4

The next tutorial is on writing definitions, descriptions and explanations. Please read this unit beforehand as the tutorial will focus on classroom activities. There will be no class time for reading. Watch the video for Unit 4, and complete the answer sheet before coming to class.

References

American Psychological Association. (2014). *APA reference style*. Retrieved 10 May 2018 from http://www.apastyle.org/learn/index.aspx?tab=2.

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington D.C.: American Psychological Association.

Anon. (2014). *Bagtheft device*. (HW0188 report). Unpublished manuscript, School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore.

Boosting 3D printing with new research centre. (2013). *NTULink*, 126, p. 24.

IEEE Periodicals Transactions/Journals Department. (2016). *IEEE editorial style manual*. Retrieved 10 May 2018 from http://ieeeauthorcenter.ieee.org/wp-content/uploads/IEEE_Style_Manual.pdf

NTU to trial Singapore's first driverless vehicle on the roads. (2013). *NTULink*, 85, p. 25.

Contents Unit 3 Unit 5

Unit 4

Writing definitions, descriptions, and explanations

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Introduction

When writing or speaking, technical experts often need to define terms, describe mechanisms or processes, and provide 'how' or 'why' explanations. You may be asked to propose a solution for a problematic product that customers have complained about. If you are writing such a proposal, you will need to describe the product and explain the problem. Then you will describe and explain your proposed solution. As you write, it is also likely that you will have to define and explain technical terms.

There are three sections in this unit. In the first section, you will learn how to write effective definitions, using a three-part structure. The second section focuses on how to write systematic and clear descriptions of mechanisms and processes. Here you will learn how to organise and structure such descriptions effectively. The final section highlights the language features you should pay attention to when writing technical definitions, descriptions and explanations.

Learning outcomes

After completing this unit, you should be able to:

1. produce effective technical definitions, using a three-part structure and different ways of extending a definition;
2. write accurate descriptions and explanations of mechanisms and processes; and
3. use appropriate language forms and constructions when writing technical definitions, descriptions, and explanations.

Definitions

Definitions are often important because they enable writers and readers, and speakers and listeners, to have a common understanding of what a word means. Technical experts often need to define terms that they use so that their audiences have a precise understanding of what such terms refer to.

To define is to assign a specific meaning to a term. The typical way to define a term in a technical context is to identify the class or category it belongs to, and then to specify how it is differentiated from other terms in that class. Put simply, a basic technical definition consists of three parts:

Term + Classification + Differentiation

For example:

An engineer	*is an expert*	*who designs and builds complicated products, machines, systems, or structures.*
Term	**Classification**	**Differentiation**

When classifying a technical term, it is important to be as precise as possible, by using specific rather than general terms. For instance, we may classify a resistor as an 'object'. But the word 'object' is not useful as it is too broad in meaning. A more concrete word is 'device', but even this term is not as useful as the expression 'circuit component', which specifies the type of device.

Activity 4.1
Writing a simple definition

Write a simple definition for one of the terms below. Compare the definition you have written with that written by another student for the same term.

Table 4.1: Simple definitions

Terms	Definition
1. Internet of things	
2. Microscope	
3. Experiment	

Extended definitions

In describing mechanisms and processes, it is often important to provide an extended definition to fully clarify what a technical term refers to. Such an *extended definition* includes additional information such as the type, function, and parts or steps involved (as in a process).

Here is an example of an extended definition of the term *cloud computing*:

> The term ***cloud computing*** refers to the collective set of software services offered over the Internet by large data centres. The data centres offer superior computing power that can be shared by the general public on a pay-as-you-go scheme. These schemes offer a 'public cloud' service, which is termed ***utility computing***. Also available is a 'private cloud' service, which is targeted at businesses and large corporations. These 'private clouds' serve as an IT backend for large corporations, providing services such as a corporate e-mail exchange and secure databases. To be able to offer Software as a Service (SaaS) through an Internet-driven 'cloud', the data centres have to be significantly large in order to meet high computing demands.
>
> Adapted from Marinescu (2013)

You can extend definitions in different ways to achieve various purposes. Some common ways are:

- cause and effect: to show why something happens or to track results;
- comparison and contrast: to show differences or similarities;
- exemplification: to give real examples; and
- process: to list the steps of a procedure.

Activity 4.2
Identifying ways of extending a definition

Identify the ways used to extend the definition of 'MIPS'.

These forms include:

- cause and effect;
- comparison and contrast;
- exemplification; and
- process.

Explain your answer to the class.

Table 4.2: Extending definitions

	Ways
1. The acronym ***MIPS*** stands for ***Microprocessor without Interlocked Pipeline Stages.*** The MIPS was designed to increase performance through the use of deep instruction pipelines. One main problem with pipelining was a long waiting time for some instructions to complete, before the next instruction was passed into the pipeline. With the MIPS design, each instruction is fitted in one cycle, resulting in a single cycle throughput. When conflicts are avoided, the overall performance of the system would be significantly improved because the processors could run at a much higher frequency than before.	
2. The acronym ***MIPS*** stands for ***Microprocessor without Interlocked Pipeline Stages.*** The early MIPS architectures were 32-bit, with 64-bit versions added later. MIPS implementations can be found in a variety of embedded systems, such as workstations, servers, printers, routers and video game consoles.	
3. The acronym MIPS stands for Microprocessor without Interlocked Pipeline Stages. MIPS comprises a reduced instruction set computing (RISC) instruction set architecture (ISA) developed by MIPS Technologies. The RISC ISA is in stark contrast to the complex instruction set computing (CISC) ISA. In CISC, multi-step complex instructions such as multiply-accumulate are supported, whereas in RISC, only simple single-cycle instructions, such as memory loads/stores, are permitted.	
4. The acronym MIPS stands for Microprocessor without Interlocked Pipeline Stages. The MIPS processor is capable of executing one instruction per cycle due to its five-stage execution instruction pipeline. The standard MIPS pipeline is made of Instruction Fetch (IF), Instruction Decode (ID), Execute (EX), Memory (MEM), and Write Back (WB). The IF stage fetches the instructions from the instruction memory and passes them on to the ID stage, where they are 'unpackaged' to extract information on operation type and source/destination register address(es). The EX stage executes the required arithmetic operation on input data, while the MEM and WB stages handle memory write tasks while maintaining data consistency for functional correctness. This pipeline allows the MIPS processor to break down and queue instructions efficiently in order to achieve a sizeable improvement in throughput performance.	

Adapted from Sweetman (2006)

Descriptions and explanations of mechanisms and processes

Overview

Technical descriptions of mechanisms or processes are often needed in product catalogues, instruction manuals, proposals, laboratory reports, and research reports.

An effective technical description often begins with a definition of the mechanism or process. This is then followed by a systematic description of the parts of the mechanism and their functions, or of the steps of the process.

Technical descriptions should be written using specific and factual words and expressions. When you compare these next two descriptions, it should be clear which is a technical description.

Description A	Description B
Olive mill wastewaters (OMW), which are produced by industries that give us olive oil, are bad for the environment. When olive oil is being removed, OMW are released from the processed olives. OMW are harmful to the environment because they cause water and air pollution.	Olive mill wastewaters (OMW) are a significant source of environmental pollution related to olive oil production industries. Olive oil extraction processes generate three phases: olive oil, solid residue and aqueous liquor (OMW) which averagely represents 20%, 30% and 50%, respectively, of the total weight of the processed olives. OMW cause serious environmental deteriorations such as colouring of natural waters, alteration of soil quality, phytotoxicity and odour nuisance.

Achak et al. (2009), p. 117

Descriptions of a mechanism

Mechanism descriptions involve describing the different parts of the mechanism, and how two or more of these parts function together to do something.

When describing a mechanism and its parts, you need to give sufficient and relevant information, such as size, shape, colour, finish, texture, and material.

For example:

The phone measures 130mmx68mmx12mm and weighs 168g. Its cover is made of a magnesium titanium alloy, a scratch-resistant material.

Your description of the parts of the mechanism should be arranged logically:

- **spatial order**, e.g., from top to bottom, from left to right, or from inside to outside

Here is a description of a part of a wheelchair using the top-to-bottom approach:

The wheelchair's arms and footrests provide support for the body. Armrests may be short, for ease in pulling up to a desk, or longer to support the entire arm. Some arms are detachable or swing out of the way, making transfers and transporting the chair easier. Footrests support the legs for comfort or medical reasons (relief of edema). Some footrests are removable or swing under the seat. The height and angle are usually adjustable.

Adapted from Posse & Mann (2005) p. 225

- **functional order**, i.e., according to how the device (or system) works

The following is a description of the functions of an RFID reader:

While identifying entities, for example, visitors and medicines, with their RFID tags, an RFID reader could also enhance the localization information from other modalities such as PIR or ultrasonic sensors by reporting the presence of an entity within its valid cone-shape sensing area.

Adapted from Biswas et al. (2006) p. 199

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Depending on the communication context (e.g., purpose, reader, and situation), you may need to explain how a part of a device (or system) fits together with other parts, or why a part is essential.

For example:

RFID tags contain electronically stored information. Tags are activated at close proximity to an RFID reader; however, if they are powered locally by a battery, they can operate even at hundreds of meters from the reader.

To further illustrate how to write a good description of a mechanism description, here is a short passage about parts of a light microscope. You will see that the information is arranged in a spatial-functional order. Spatially, the parts are described from the bottom up, i.e., from the base or foot of the microscope to the eye-piece tube. Explanations are included to clarify the function of particular parts of this device. One such explanation is underlined for you.

Can you find other explanations?

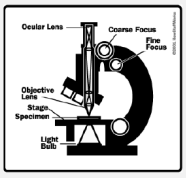

Figure 4.1: Light microscope (http://science.howstuffworks.com/light-microscope.html)

The light microscope you see in this illustration is an upright microscope, as the illumination system is below the stage and the lens system is above it.

The base supports the weight of all of the microscope parts. At the base of the microscope are the light source, condenser and rheostat. The lamp, which is typically a tungsten-filament light bulb, produces the light. The condenser is a lens system that aligns and focuses the light from the lamp onto the specimen, while the rheostat adjusts the current applied to the lamp to control the intensity of the light produced. Pinhole apertures are positioned in the light path to alter the amount of light that reaches the condenser for enhancing contrast in the image.

Directly above the base is the stage, a platform where the specimen to be observed is placed. If you are looking at a living specimen, even the slightest movement will move the object out of focus. Clips are, therefore, used to hold the specimen still.

The objective lens forms the image by gathering light from the specimen. The eyepiece transmits and magnifies the image from the objective lens to your eye, while the tube holds the eyepiece at the proper distance from the objective lens and blocks out stray light.

Adapted from Freudenrich (2001)

In summary, here are some guidelines on how to describe a mechanism:

- Provide factual and precise descriptions of the physical characteristics of the mechanism.
- Clearly classify each part, including definitions and explanations.
- Describe the parts of the mechanism logically, using the spatial and/or functional patterns.
- Explain how the parts fit and work together.
- Use appropriate verb tenses, voice, and signal markers (see **Focus on language** below).

Activity 4.3
Describing a mechanism

1. Work in pairs or groups. Study the visual and notes on a motorised carbonator.
2. Describe the parts that make up the carbonator. Provide credible details to complete the description of each part/sub-part. Organise your description of the parts into a systematic description of the carbonator.

Figure 4.2: Parts of a motorised carbonator
(http://www.amazon.com/1-Flavor-Fountain-Draft-System-Cooling/dp/B004O3PZJU)

Table 4.3: Parts of a motorised carbonator

Parts	Sub-parts	Sub-functions
Carbonation tank	Check valve	Chamber where carbon dioxide (CO_2) and fresh water are mixed to create seltzer (or carbonated water). Check valve prevents seltzer from re-entering pump and water system.
Water system	Water tank	Holds water that is to be mixed with CO_2.
Regulated CO_2 cylinder	Pressure valve	Releases CO_2 gas at constant pressure into the carbonation tank.
Electric motor	Water pump	Forces water into carbonation cylinder to kick-start production of seltzer.
Cooling system	Flash chiller (with stainless steel tubing)	Keeps temperature of faucet at a relatively cool 0°-2°C to prevent loss of carbonation at the output.

Descriptions of a process

While mechanism descriptions emphasise the physical characteristics of a mechanism and how the mechanism works, process descriptions focus on the stages of a particular process.

A process description could be a set of instructions telling the reader how to do something. As a technical writer, you may be required to produce safety instructions (found in safety guidelines and product assembly manuals) and procedural instructions (found in training and laboratory manuals).

When giving instructions, make sure you present them in a clear, step-by-step sequence, so that your readers can easily complete the procedure by following one step after another. It is also a good idea to number the steps for easy reference. Often, you may also need to explain some or all of the steps in more detail: for instance, you may need to provide the reasons for why particular steps are necessary or important, or point out precautions that may need to be taken for some steps.

The most typical and direct way of writing instructions for each step of a procedure is to use imperatives, i.e., sentences starting with a verb, e.g., 'Download and install the app' and 'Copy the

desired photo to your phone' (see **Focus on language** below). Imperatives make it easy for readers to identify exactly what they need to do.
Here is an example of a set of numbered steps for uploading photographs to Instagram using a mobile phone:

1. Download and install the Instagram application on your phone.
2. Copy the desired photo to your phone, if it is not already on your phone.
3. Open the Instagram app on your phone.
4. Tap the Camera tab to open the Instagram camera.
5. Select the photograph that you want to upload.
6. Add a caption to the photograph.
7. Tap the Share button to share your photograph.
8. Repeat the above steps for other photographs.

Figure 4.3: Uploading photographs to Instagram

Process descriptions can also be third-person descriptions that explain processes in nature, such as how earthquakes occur, or objectively describe how a task is or was carried out, such as how water content of a soil sample is or was determined. The latter is the type of process description that technical specialists often have to write.

As with procedural instructions, when writing such descriptions, you should present the steps taken in the order in which they are or have been carried out. Again, you may need to include the reasons or explanations for some steps in the task. These explanations help the readers, for instance, know the precautions that have been taken to ensure safety, or the measures taken to ensure that an experiment was done properly.

For example:

- The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of this apparatus and to protect it from overheating, these slots and openings must never be blocked or covered.
- Do not place a water-containing vessel on this apparatus as this can result in a risk of fire or electric shock.

Here is an example of a coherently written process description, where the steps are presented in a logical sequence and explanations provided for particular steps. The short text is taken from a journal article on valuating the BEST (Beerkan Estimation of Soil Transfer) procedure, a model used to predict water retention of soils. (In the text, PSD refers to ***particle size distribution***.)

The PSD was measured using conventional methods following H_2O_2 pre-treatment to eliminate organic matter and clay deflocculation using sodium metaphosphate and mechanical agitation. Fine size fractions were determined by the hydrometer method, whereas the coarse fractions were obtained by mechanical sieving (Gee and Or, 2002). A total of 14 particle size limits were considered for each sample. In particular, two fractions finer than 0.002 mm were determined because using a large range of measured diameters was considered to be advisable to evaluate the ability of a particular model to reproduce the complete PSD (Bagarello et al., 2009). The clay, cl, silt, si, and sand, sa, percentages were determined according to the USDA classification (Gee and Or, 2002).

Water retention data were determined on each undisturbed soil core by a hanging water column apparatus (Burke et al., 1986) for h values ranging from -0.05 to -1.5 m. In this apparatus, a sintered porous plate having an air entry value of -2.0 m was connected to a graduated burette, which could be moved in height to establish a given pressure head value and which allowed measurement of the drained water from the

core. The cores were previously saturated on the porous plate by wetting from below and then equilibrated at established decreasing h values. The volumetric water content corresponding to the last equilibrium pressure head value was determined by oven drying the core. The volume of water drained into the burette was recorded and used to calculate the volumetric water content corresponding to the equilibrium pressure heads. For each applied h value of the sequence, the mean water content of the two replicated cores was considered. At the end of the experiment, the undisturbed soil cores were used to determine the mean ρ_b. Soil porosity, f, was calculated from ρ_b, assuming a particle density of 2.65 Mg m^{-3}. …

Bagarello & Iovino (2012) p. 69

Activity 4.4
Providing explanations

Video activity (letVAfly, 2007)

1. Watch Virgin America's safety video:

https://www.youtube.com/watch?v=eyygn8HFTCo

2. Listen carefully to the instructions detailed in the demonstration before supplying a reason or explanation for each of the following steps:

Table 4.4: Providing explanations

Steps	Reason/ Explanation
Ensure the seat belt fits low and tight across the lap.	
Take a moment to look around and find your closest exit.	
Put your (oxygen) mask on before helping others.	
As you leave the aircraft, pull sharply on the red plastic handles to inflate. (Clue: Look at the first part of the sentence.)	

3. Present your answers to the class.

Focus on language

This section highlights various language forms and constructions used in definitions, descriptions, and explanations:

- tenses,
- active and passive voice,

- imperative and declarative constructions, and
- signal markers.

Tenses

- **Simple present tense:** When providing definitions and giving descriptions of conventional mechanisms, use the simple present tense.

  A typical chemical reactor includes a helical, tube-in heat exchanger.

  A memory unit is a collection of cells capable of storing a large quantity of binary information.

  A microscope is an instrument that magnifies extremely small objects so that they are easily seen. It produces an image much larger than the object itself. The three main parts of a microscope are the foot, the tube and the body.

- **Simple past tense: When describing processes or tasks that have been carried out, use the simple past tense.**

  The readings of the voltmeter, ammeter and wattmeter were recorded.

  Technical illustrations in the report were carefully explained.

  The liquid in Sample 2 evaporated at an alarming rate.

Active and passive voice

When describing mechanisms and processes, you may use both the active and passive forms.

- **Active voice:** When you want to emphasise the person or thing performing an action, use the active voice.

  Control gauges monitor (or monitored) air pressure inside the chamber.

  Technical communicators make complex information accessible to those who need the information.

  Well-written instructions help users succeed in performing an action.

- **Passive voice:** When you want to emphasise the person or thing receiving an action, or focus on the process rather than the person or thing performing the process, use the passive voice.

  The power factor of the circuit was calculated from the equation W/V1s.

  A revised curriculum has been designed for engineering students.

  English is recognised as the primary form of communication.

In a passive construction, the do-er, indicated after the preposition *by*, may or may not be mentioned, depending on the necessity of the information.

For example:
The trip lever was activated (by the research assistant).

Activity 4.5
Using the active and passive forms

In the following text, verbs in the active and passive forms are underlined.

> Digital systems have such a prominent role in everyday life that we refer to the present technological period as the digital age. Digital systems are used in communication, business transactions, traffic control, space guidance, medical treatment, weather monitoring, the Internet, and many other commercial, industrial and scientific enterprises. We have digital telephones, digital television, digital versatile discs, digital cameras, and of course, digital computers. The most striking property of the digital computer is its generality. It can follow a sequence of instructions, called a program, that operates on given data. The user can specify and change the program or the data according to the specific need. Because of this flexibility, general-purpose digital computers can perform a variety of information processing tasks that range over a wide spectrum of applications.
>
> Mano (2002)

1. Convert the active voice to the passive, and the passive voice to the active. Make necessary changes to the affected sentences.
2. Present your answer to the class.

Imperative and declarative constructions

- **Imperative structures:** When describing processes in the form of instructions, use imperative structures.

  Close the bottle after use.

  Store the case in an upright position.

  Never put unneutralised AOSEPT PLUS solution directly into the eye.
- **Declarative constructions:** When providing third-person descriptions, use declarative constructions.

  The hydrogen peroxide and poloxamer surfactant disinfect and clean the lenses.

  It is important to keep your AOSEPT PLUS cup and lens holder clean and free from contamination.

Signal markers

Use appropriate signal markers to show how ideas relate to each other, and to achieve cohesion. Below are examples of signal markers depicting various functions:

- **showing chronology** (e.g., *first, second …*)

  Cold water was first released into the copper tank. The heating element was then activated. … Last, the water pressure was monitored to prevent damage to the mechanism.

- **showing cause** (e.g., *as a result of*)

  New product development may bring commercial success as a result of effective communication between the departments involved.

- **showing simultaneous events** (e.g., *at the same time*)

  Using cloud computing, companies could store data elsewhere, so there is little need for physical space. At the same time, companies could save money on IT support.

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Activity 4.6
Applying signal markers

Video activity (Thompson, 2012)

Watch a video on how to create a penny battery.

https://www.youtube.com/watch?v=rIdPfDHeROI

1. As you watch, make notes of the steps in the process. Include explanations.

Table 4.5: Explanations of steps

Notes	Explanation

2. Describe the process in 80-100 words. Make sure essential steps and explanations are included. Use appropriate signal markers to connect ideas.
3. Share your paragraph with the class.

Summary

In this unit, you learnt how to write simple and extended definitions as well as how to describe mechanisms and processes. You also learnt how to use language forms and constructions appropriately in definitions, descriptions, and explanations, including tenses, active and passive voice, imperative and declarative structures as well as signal markers, to perform specific functions.

Preparing for Unit 5

The next tutorial is on writing and presenting arguments. Please read this unit beforehand as the tutorial will focus on classroom activities. There will be no class time for reading. Watch the video for Unit 5, and complete the answer sheet before coming to class.

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Unit 5

Writing and presenting arguments

Introduction

Effective communication involves making claims persuasively and supporting them effectively with appropriate evidence. As a communicator, you need to be able to convince your listener or reader about a viewpoint, for example, about what factors caused a problem in a particular situation, or what a company ought to do to solve a problem. In other words, what you need to do here is to present an argument. This unit explains how to craft a persuasive argument by identifying key elements in logical argumentation, including using the right kind of evidence, and avoiding logical fallacies.

Learning outcomes

After completing this unit, you should be able to:

1. identify the components of a basic model of argumentation;
2. craft a persuasive argument by identifying the main elements of an argument and supporting it with appropriate evidence;
3. identify and evaluate evidence in support of claims made by others; and
4. identify logical fallacies in your own and other people's arguments.

Toulmin's model of argumentation

Stephen Toulmin (1922-2009) was a British philosopher and logician who developed a widely-used model of argumentation. A basic understanding of this model is helpful if you need to construct a persuasive argument for an audience used to making logic-based decisions.

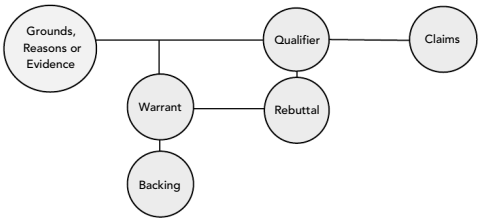
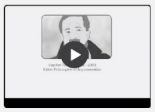


Figure 5.1: Toulmin's model of argumentation
Adapted from Toulmin Model (n.d.)

Activity 5.1
Identifying components in a model argument

Video activity (Wright, 2012)

Watch the video of a short lecture entitled 'The Toulmin model of argumentation'. As you listen, write notes on the components in the table below.



http://www.youtube.com/watch?v=D-YPPQztuOY

Table 5.1: Components of Toulmin's model

Components	Notes
Claim	
Evidence/data	
Warrant	
Backing	
Rebuttal	
Qualifier	

After completing your notes, check them against those written by other students in your group. The diagram and notes provide you with a set of guidelines for constructing an argument.

Types of evidence

To make your argument persuasive, you need to support it with the right kinds of evidence. Evidence used effective l arguments frequently makes use of 'common sense' arguments, examples, expert testimony, facts, and numerical data.

'Common sense' arguments: 'Common sense' here means that 'Most people would think that…' The following sentence presents a common sense argument:

If you drop the glass, it will shatter.

Examples: An example makes an abstract point more concrete and therefore more vivid and memorable. Examples can be anecdotes, instances, and personal experience. Examples are often used along with numerical data.

Expert testimony: A message from an expert is more persuasive than the same message from someone without credentials. A well-researched article on a topic written by a respected scientist or scholar in a reputable journal is more likely to be persuasive than an article written by a journalist

in a popular newspaper. When you make arguments, you will often cite expert testimony from published sources.

Facts: These are details that can be shown to be true, to exist, or to have happened.

Numerical data: These include statistics, graphs, charts, and other types of quantitative data.

Activity 5.2
Identifying types of evidence

Video activity (Apple, 2017; ILE Tours, 2017)

Watch the two advertisements on smartphones below.

Discussion:

1. What are the claims made in each of the two advertisements?
2. What types of evidence do you think are being used to support the claims made in the two advertisements?
3. How persuasive are the advertisements? How do you think the claims in each advertisement might be further strengthened?

Making claims defensible

When making effective arguments, it is necessary to decide on the strength of the claims you are making. If the evidence you present is not conclusive enough for you to state that something is definitely true or will definitely happen, you will need to qualify or moderate your claim using cautious language.

Language for qualifying or moderating claims (commonly referred to as 'hedges') can be appropriate modal verbs, adverbs, adjectives, and other lexical items as shown in the table below.

Table 5.2: Types of qualifiers (hedges)

Type	Examples	Use
Adjectives	*certain, some, limited*	Robots are ideal for certain kinds of work, for example, assembly work in car manufacturing plants.
Adverbs	*likely, possibly, probably, generally, basically, perhaps*	It is likely robots will replace cleaners, warehouse workers, and even taxi drivers.
Limiting phrases	*in certain/some circumstances …, in general …, it may be possible …, in most situations …*	In general, we need eight hours of sleep to function at our best.
Modal verbs	*may, might, can, could, would*	Robots may cause unemployment.
Weaker verbs	*suggest, contribute, tend, appear, seem, indicate*	The data suggest a link between sleep and academic performance.

Activity 5.3
Qualifying claims using cautious language

Make the following statements more acceptable and defensible by using different qualifiers or hedges.

1. Smoking cigarettes causes cardiovascular diseases.
2. Eating a balanced diet reduces obesity.
3. Excessive TV watching lowers a child's verbal ability.
4. A high petrol tax is the best solution to preventing global warming.
5. Drinking eight cups of water a day helps your immune system.
6. Eating tomatoes prevents heart disease and cancer.
7. The moon will be a vacation destination in the next 50 years.

8. Excessive use of Facebook causes depression.

9. Reading literature improves empathy and boosts emotional intelligence.

10. Choosing engineering as a profession will provide financial security.

Logical fallacies

A logical fallacy is an error in reasoning that will undermine the logic of your argument. Fallacies can be either invalid arguments or irrelevant points and are usually identified because they lack evidence that supports their claim. The table below explains some of the most common logical fallacies. Avoid these common fallacies in your own arguments and watch for them in the arguments of others.

Table 5.3: Common logical fallacies

Fallacies	Explanation
1. Ad hominem	An argument that attacks the character of a person rather than their arguments.
2. Ad populum argument (also called 'bandwagon' argument)	An argument that a claim is valid because many people think it is.
3. Argument for authority	An argument that a claim is valid because the person making the claim is an authority.
4. Circular argument or circular reasoning	An attempt to prove a claim by restating the claim in different words.
5. Either-or argument (also called 'false dilemma')	An argument that poses only two alternatives when in fact there might be more.
6. Hasty generalisation	An argument that draws a conclusion based on insufficient number of cases or evidence.
7. Oversimplifying	An argument that omits important information in establishing a causal link.
8. Post hoc reasoning	An argument that claims that because A precedes B, A caused B.
9. Red herring	An argument that diverts attention from the real point of an argument to something unrelated
Slippery slope argument	An argument that claims that one event will inevitably lead to a disastrous chain of consequences.

Activity 5.4
Identifying types of fallacy

The sentences below illustrate the fallacies listed in Table 5.3. Match these sentences with the fallacies they illustrate in the right-hand column. Compare your answers with those of other students in your group.

Table 5.4: Identifying logical fallacies

Fallacious statement		Type of fallacy
1. We can either stop using plastic or destroy the earth.	•	• Ad hominem
2. We should not worry about the destruction of natural habitats when we have homeless people in the country.	•	• Argument from authority
3. The answer to childhood obesity is to teach kids to just say 'no' to unhealthy food.	•	• Ad populum argument (also called 'bandwagon' argument')
4. The dietician's advice on meat consumption cannot be trusted because he is vegetarian.	•	• Circular argument or circular reasoning (also called 'begging the question')
5. This bird's nest soup must be good for you; the top scorers in the national examinations have it every day.	•	• Either-or argument (also called 'false dilemma')
6. That patient developed autism after having the vaccine, which proves that the vaccine causes autism.	•	• Hasty generalisation
7. Global warming doesn't exist because the earth is not getting warmer.	•	• Oversimplifying
8. The device does not sink because it floats.	•	• Post hoc reasoning
9. The death penalty is effective against drug abuse; at least 32 countries impose capital punishment for drug-related offences.	•	• Red herring
10. Alcohol consumption leads to unruly behaviour and eventually to riots, destruction of public property, and anarchy.	•	• Slippery slope argument

Practise making arguments

At university as well as in the workplace, you need to convince others of the soundness of your ideas through logical reasoning and well-constructed arguments. This unit provides you with a model for argumentation which you can use at university in seminars or tutorials and, eventually, in a professional setting. Practise crafting your own argument using the model given in the following activity.

Activity 5.5
Writing and presenting an argument

1. In your group, write a paragraph arguing for or against one of the topics below.
   - Animal testing
   - Genetically modified food
   - Nuclear energy
   - Recycling waste (e.g., e-waste)
   - Social media
   - Use of fossil fuels (e.g., coal or oil)*
   - Topic of your choice

   Your argument should have the three basic components of an argument: claim, evidence, warrant. You may also want to qualify your claims with hedging expressions you learned in Activity 5.3. One of the topics (*) has been exemplified for you.

Claim	Evidence	Warrant
Oil as a source of energy has no long-term future because it is a finite energy resource.	Research has predicted when oil is likely to be depleted.	We can trust this prediction because research findings are considered to be objective and empirical.

Topic:

Claim	Evidence	Warrant

2. Present your group's argument to the class. Critique the arguments of other groups for logical reasoning and persuasiveness.

Summary

In this unit, you learnt how to craft persuasive arguments. You learnt that for an argument to be persuasive, it needs to be logically constructed and supported by the right kind of evidence, and should avoid logical fallacies. You also learnt about common types of logical fallacies, and how to avoid making them in your own arguments.

Preparing for Unit 6

The next tutorial is on revising and editing. Please read this unit beforehand as the tutorial will focus on classroom activities. There will be no class time for reading. Watch the video for Unit 6, and complete the answer sheet before coming to class.

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Unit 6

Revising and editing

Important reminder: Bring your draft proposals to class.

Introduction

The writing process does not end with the final word that is written. In the writing process, **revising** and **editing** are necessary steps to ensure that your writing is coherent and cohesive. Careful proofreading ensures that the work you submit is free from errors, and is therefore essential to good writing, since a mistake-ridden piece of writing leaves a bad impression on your readers.

Learning outcomes

After completing this unit, you should be able to:

1. identify issues affecting coherence and cohesion in texts;
2. know how to use different types of cohesive devices and ways of achieving coherence;
3. rectify problems pertaining to coherence and cohesion; and
4. identify and correct language issues affecting readability.

Strategies for revising and editing

Revise for coherence

Coherence refers to unity of ideas or the overall connectedness of ideas in a piece of writing, the way in which ideas fit together to form a complete picture. The more coherent the paragraph, the less effort the reader needs to follow the flow of ideas.

Activity 6.1
Comparing paragraphs for coherence

Here are two paragraphs. Which one do you find coherent, and why?

Paragraph 1

XCite creates quality mobile phones like no other. XCite phones are sassy yet functional. Use an XCite phone and command attention. Stay on top of your game anywhere you go. Look cool anytime you want. Get XCite. With another store opening at Ngee Ann City along Orchard Road, XCite is never far from you. XCite is truly your lifestyle and technology companion.

Paragraph 2

XCite creates quality mobile phones like no other. Everyone needs an XCite phone. Do you want attention? Our best items are the sassy yet functional ones. Get an XCite phone. Anywhere you go, you can stay on top of your game. XCite is the name of the game. Anytime you want, you can look cool. We are your lifestyle and technology companion with another store opening at Ngee Ann City along Orchard Road. We are always near you. Be XCite-d.

When revising for coherence:

1. check that you have organised your writing as a whole, as well as each section of your writing, in a structured way;
2. check that your ideas flow logically from section to section, paragraph to paragraph, and sentence to sentence;

3. check that your argument is consistent and that you do not contradict yourself in different parts of your writing; and
4. check that the details you included are all relevant to your purpose and main messages.

Revise for cohesion

Cohesion is an important aspect of coherence, and refers to how sentences (and paragraphs) are connected to achieve a smooth flow of ideas. Cohesion is the 'glue' that links your ideas together, to help your reader move easily from sentence to sentence. This link is achieved through the use of **cohesive devices**. Before we consider how to revise for cohesion, let us look at an example of a passage with cohesive devices.

> The PA534 popcorn maker has attractive features. It has only one button, making it extremely easy to use. It runs on four batteries, so you can use it anywhere – in your kitchen, in your office, on camping trips and picnics, and even on vacations! Add your favourite ingredient to your popcorn, be it salt, honey or spice. Treat yourself and your family and friends to your unique popcorn creations.

The devices used are repetition ('popcorn' and variations of 'you'), reference word ('it'), and summary word ('ingredient' for 'salt, honey or spice'). As you can see, when cohesive devices are used appropriately, they help you, the reader, to move easily from sentence to sentence, or from paragraph to paragraph.

Therefore, when you revise for cohesion, consider how you have used the following devices:

- transition from old to new information,
- thematic consistency,
- reference words, and
- transition signals.

The next segment describes what each cohesive device is and how it works.

Transition from old to new information

Also known as the 'old-to-new' technique, this device links an idea in the new (i.e., second) sentence to that in the earlier sentence.

Activity 6.2

Transitioning from old to new information

Look at the two examples below. Which one shows greater cohesion?

Example 1

Joanna will be presenting at tomorrow's seminar. Every junior member of the team must report what they have achieved in the last 3 months.

Example 2

Joanna will be presenting at tomorrow's seminar. The session will be attended by all junior members of the team, who will report what they have achieved in the last 3 months.

Thematic consistency

Before we consider what thematic consistency is, let us be clear about the term 'theme'. The theme of a sentence is the topic (or main idea) of the sentence. The topic of a sentence is usually the element that is at the beginning of the sentence.

For example:

> Ahkbar wants a new computer. He will go to the store tomorrow to get one. But he is unsure which model suits him best. So, he has asked me to help him.

In this example, 'Ahkbar' is the theme or topic of all the sentences. In other words, the sentences are about Ahkbar getting a new computer.

Thematic consistency, staying with the same topic as you move from sentence to sentence, is another way of achieving cohesion, or linking sentences in a paragraph into a smooth flow. This means of achieving cohesion is useful for paragraphs that focus on one subject as a topic.

Activity 6.3
Identifying the topic of a paragraph

Skim the following short paragraph in a few seconds, and write down its topic.

> A packet is a set of digital signals with an identification word or packet identification number (PID) of 13 bits. Each packet is of a fixed length, set for television at 188 bytes (or 204 bytes when Reed–Solomon coding is added), and it carries part of the information for a transmitted programme. At a receiver, the packets with the chosen PID can be assembled into a stream of data that constitute the signal for a programme.
>
> Sinclair (2011)

Now underline the theme of each sentence. What do you notice?

Reference words

Reference words are words that point back to words in previous sentences (or sometimes, forward to words in sentences that follow). Examples of reference words include *another, any, him, her, it, one, the, the other, they, this, those,* and *some*.

Reference words are a useful cohesive device. However, when using reference words, make sure what they refer to is clear. For some types of reference words, make sure also that the reference word 'agrees' with what it refers to (e.g., *he* to refer back to *John*, and not *she*). Look at how reference words are used in the following sentences to refer to previously used nouns.

Activity 6.4
Identifying reference words

Identify the reference words in the following sentences.

1. Did you know that Sam wrote a scheduling programme that allowed him to be placed in a class with mostly female students?

2. The experiment used two different packaging materials. One was paper while the other was Styrofoam.

3. To remove coffee stains on teeth, either a bleaching agent or an abrasive can be used. My dentist recommends the latter, which is commonly found in whitening toothpaste.

Transition signals

Transition signals are words or phrases that link sentences and paragraphs together by indicating a relationship between them. They help to direct the reader's attention from one idea to another. Signals can be used to indicate sequence, time, analogy, comparison, contrast, addition, opposition, and conclusion.

To achieve cohesion, it important to use transition signals correctly. Make sure that each transition signal that you use expresses the relationship between the two sentences or paragraphs correctly.

Below are commonly used transition signals and their functions.

Table 6.1: Transition signals and their functions

Signal markers	Functions
firstly, secondly, thirdly…; next; finally; last but not least	Describing a sequence
furthermore; in addition; moreover	Adding
as an illustration; for example; for instance; to illustrate	Giving examples
compared to; like; similarly	Comparing
however; in contrast; on the one hand… on the other hand; unlike; whereas	Expressing contrast
above all; certainly; in fact; indeed; without doubt	Emphasising a point
in essence; in other words; in short; that is	Repeating and restating
in conclusion; in general; on the whole; to conclude	Summarising, generalising, and concluding

Activity 6.5
Identifying transition signals

Can you identify the transition signals used in the text below? What function does each signal serve?

We conducted an experiment to find out which household reagent was the most effective in removing lipstick stains. First, we created stains on cotton cloths, leaving them untouched for 20 minutes. In the meantime, we prepared four different reagents to be used on the stains. These were laundry detergent, petroleum jelly, vinegar and baking soda. At the end of 20 minutes, we applied each reagent directly on the stains by rubbing the reagent into the stain for 1 minute. Lastly, the cloths were washed in clean water for 1 minute.

Table 6.2: Identifying transition signals

Signal markers	Function

Edit for language

Language issues affect readability. When editing for language, make sure that you have paid attention to **grammatical rules.**

Activity 6.6
Editing for language

Identify and correct the language errors in the following sentences.

1. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means. Without the prior written permission of the publisher.

2. On hot days, temperature differences creates pressure differences.

3. Aimed at finding out the best storage condition for bananas, the students experimented with different packaging materials.

4. Pressure differences affect buildings pressure measurements must be taken.

5. The CEO announced the company's plans to develop green products this morning.

Here are a few common problems to note:

- dangling modifiers;
- misplaced modifiers;
- run-on sentences;
- sentence fragments; and
- subject-verb agreement errors.

Dangling modifier

A **dangling modifier** occurs **at the front of a sentence and does not logically describe the subject of the sentence**. Grammatically, example 7 says that the mechanic was melted (!), and example 8 says that the speaker 'I' was dropped from a height (how likely is this to happen?).

7. *When melted, the mechanic poured the iron into the mould.

8. *Dropped from a height, I saw the clay model break into two.

You can correct a sentence containing a dangling modifier by **changing the subject of the sentence** so as to show a logical connection between the two:

When melted, the iron was poured into the mould.

Dropped from a height, the clay model broke into two.

You can also **change the modifier**:

Having melted the iron, the mechanic poured the substance into the mould.

Turning around, I saw the clay model break into two.

Misplaced modifier

A **misplaced modifier** is **a descriptive word or phrase that does not logically describe the word it appears to describe**, because it is not placed in the right position in the sentence. For example, in sentence 5, the word 'yesterday' seems to describe 'belonging' — which is odd — rather than 'lost'. Similarly in sentence 6, the phrase 'with the broken toe' seems to describe 'walked' rather than 'technician'.

5. *He lost an important document belonging to a client yesterday.
6. *The technician walked slowly with the broken toe.

You can correct a sentence containing a misplaced modifier by positioning the modifier close to the word that is being described:

Yesterday, he lost an important document belonging to a client.

The technician with the broken toe walked slowly.

Run-on sentence

A **run-on sentence** occurs when **two main clauses are ungrammatically joined together**.

For instance:

3. *The digital divide is a problem even in developing countries not everyone has access to the Internet's resources.
4. *Some people have access to the Internet and a host of resources other people do not.

You can correct run-on sentences by using punctuation and/or conjunctions.

Example 3 can be improved as follows:

The digital divide is a problem even in developing countries. Not everyone has access to the Internet's resources. (use a full stop)

The digital divide is a problem even in developing countries; not everyone has access to the Internet's resources. (use a semi-colon)

The digital divide is a problem even in developing countries because not everyone has access to the Internet's resources. (use a subordinating conjunction)

Example 4 can be revised as follows:

Some people have access to the Internet and a host of resources; other people do not. (use a semi-colon)

Some people have access to the Internet and a host of resources, but other people do not. (use a comma and a co-ordinating conjunction)

Sentence fragment

A **sentence fragment** is an **incomplete sentence with a full-stop.** A sentence fragment lacks a subject or a verb, or is grammatically incomplete in some other way. The fragments in examples 1 and 2 (below) are 'Following a discussion' and 'Such as Velcro as a fastener was inspired by the gecko moving on glass'.

1. *Following a discussion. The committee accepted his ideas.
2. *Nature has given us many design ideas. Such as Velcro as a fastener was inspired by the gecko moving on glass.

Complete sentences should contain a grammatically complete structure, as follows:

Following a discussion, the committee accepted his ideas.

Nature has given us many design ideas. For example, Velcro as a fastener was inspired by the gecko moving on glass.

Writers often produce sentence fragments because they put a full-stop where there should be a comma (as in the first example above), which leaves the sentence grammatically ill-formed.

Subject-verb agreement

Put simply, **subject-verb agreement** means **the subject and verb must agree in number**. In other words, a singular subject takes a singular verb, and a plural subject takes a plural verb. The subject may be a noun or a pronoun.

For example:

The leader of the team is ready to present.
The leader of the teams is ready to present.
Copper and silver are metals.
The rope and pulley is a simple device to lift a load.
Each volunteer was injected with the vaccine.
They were not aware of the risks involved in the study.

The following sentence illustrates a subject-verb agreement error:

Air pollution due to natural impurities and human activities pose a huge problem.

In the sentence, the verb should be 'poses' — singular form — as it refers to the singular noun 'air pollution' and not to 'natural impurities and human activities'.

Revising and editing can be tedious. The checklist at the end of this unit (see Appendix) may help make this task easier for you.

A final word: Even after revising and editing your writing, you should spend some time proofreading it. Give your work a final check for mechanics (spelling and punctuation) and typographical errors. Error-free writing shows that you are careful and serious about your writing.

Revision of draft report

You will now revise and edit your draft report. Use the strategies you have learnt in this unit. Consult your tutor if you need help.

Summary

In this unit, you learnt about the importance of revising and editing in the writing process. You have learnt what to consider when revising for coherence and cohesion, and you also learnt about editing for language, paying particular attention to accurate writing.

Preparing for Unit 7

The next tutorial is on writing short reports. Please read this unit beforehand as the tutorial will focus on classroom activities. There will be no class time for reading. Watch the video for Unit 7, and complete the answer sheet before coming to class.

Reference

Sinclair, I. (2011). Digital television and radio. In *Electronics simplified* (3rd ed.), (pp. 297-309). Burlington, Mass.: Newnes.

Appendix

Revision checklist

Content	✓
Is the content accurate? Is the content relevant? Is any information redundant or missing?	
Is sufficient support given to substantiate the main idea(s)?	
Are references provided for all the ideas and information you have taken from published sources?	
Coherence and cohesion	✓
Is the argument consistent?	
Does each paragraph have one idea? Is the idea expressed clearly in a topic sentence?	
Are the ideas presented in a logical order?	
Is the transition from old information to new clearly shown?	
Is there thematic consistency?	
Are reference words used?	
Are there sufficient transition signals to direct readers?	
Is accurate grammar used?	

Contents Unit 6 Unit 8

Unit 7

Writing short reports

Introduction

At the workplace, you are expected to be proficient not only in handling the technical aspects of your job but also in communicating, orally and in writing, with people around you, including your employers, customers, and colleagues. One very common task in professional communication is writing proposals and reports. This unit will introduce you to the writing of short reports, specifically informative and analytical reports.

Learning outcomes

After completing this unit, you should be able to:

1. organise short reports using the **IBC** format;
2. distinguish between informative reports and analytical reports; and
3. write a coherent evaluation report.

Short reports

Generally, whether a report should be formal or informal, long or short is determined by a host of considerations including the context and purpose of the communication, the needs of the audience, industry standards, and organisational requirements. The focus of this unit is on short reports at the workplace. This type of report is usually written to provide key points rather than details as it may be required at shorter notice and has a more limited distribution. Thus short reports are written in a less formal style. Short reports can also be written in various formats such as a letter, an email, or a report.

Functions of reports

Reports can be classified broadly into two types: informative reports and analytical. Informative reports, as the name suggests, are written mainly for the purpose of conveying information. Analytical reports, on the other hand, study the information more critically, try to answer the question of 'so what' for the readers and prompt them to take certain actions. Figure 7.1 shows the common types of reports that fall under each category.

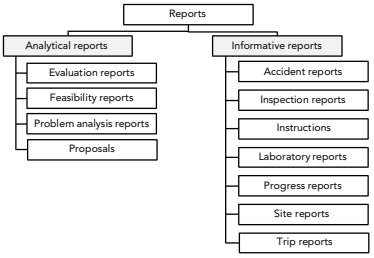

Figure 7.1: Common types of reports

Although the functions of reports may vary, there are conventions for writing them. In this unit, we shall discuss what these conventions are and learn how to apply them. Once you are familiar with these conventions, you will be able to adapt them to all types of workplace reports that you may be asked to write.

The IBC structure of reports

For any piece of writing to be considered whole, it must have three parts — introduction, body and conclusion. We may refer to this structure as the **IBC** structure, in short. In this model, the terms 'introduction', 'body' and 'conclusion' are used in a general way, as organisational headings, and not to be mistaken for descriptive headings which indicate the contents of different sections.

As a broad guide, the **IBC** structure of reports should capture the following information:

I: serves as an introduction, and typically provides background information and a statement of the objective(s) of the report;

B: provides supporting details; and

C: restates key points, with recommendations (if relevant).

From the outline above, you may observe that **I** can be written as a single paragraph with a specific descriptive heading, or as a few paragraphs with one descriptive heading and a few sub-headings. The same applies to sections **B** and **C**. The type and number of descriptive headings and sub-headings to use must ultimately serve the purpose of the report and needs of the audience, besides meeting organisational requirements and industry standards.

Activity 7.1
Analysing an informative report

Quickly read the following report.

[Report title]

1. The Ministry of Manpower (MOM) has ordered work at our site to be suspended indefinitely. MOM, which is currently investigating the cause of the accident, has instructed that we check all the support systems and rectify all shortcomings. Their officers will inspect our site again in a week's time before they decide whether or not to lift the suspension order.
2. I have investigated the causes of the fatal accident, which took place on 12 March 2014 at the Ming Sheng Community Centre construction site. This report records what took place, the likely causes of the accident and my recommendations.
3. In view of this, I recommend that we employ a safety consultant immediately to help us revamp our support system. To ensure that such accidents do not happen again, I suggest we appoint more safety officers to conduct regular checks, and to enforce stricter safety measures.
4. Based on my interview with the workers and the accounts of two eye witnesses, the collapse was likely to be caused by the following:
   - The metal frames that were used to support the formwork had not been properly erected;
   - The top of the support system was not level, so it could not take the weight of the formwork;

- The vibrations resulting from placing the concrete may have caused the scaffolding to collapse;
- Lack of communication between the site supervisor and the workers.

5. I will keep you informed of the outcome of MOM's investigation and follow-up inspection of our site.
6. On Monday, 12 March 2014 at about 3.00 pm, the formwork and support system comprising metal scaffolding for one of the blocks under construction collapsed. Of the five workers injured, three were in critical condition. All were taken to Singapore General Hospital and warded. I have been informed that the two of them with minor injuries will be discharged this evening.

Enclosed: Stop-order letter from MOM.

Adapted from Cheung, D., & Li, S. Y., (2001). p. 186

Answer the following questions.

1. The paragraphs in this report are not properly sequenced. How should the paragraphs be arranged using the **IBC** structure? Rearrange the numbers of the paragraphs in the correct order (e.g., 5, 1, 2, etc.).

Paragraph sequence

2. Which paragraphs fall under the **I**, **B** and **C** sections respectively?

	Paragraph
I (Introduction):	
B (Body):	
C (Conclusion):	

3. What type of informative report is this? What is its purpose?

Type of report	Purpose

4. Suggest a suitable subject title for this report and write it in the title box provided.

Evaluation reports

Evaluation reports are analytical reports because they provide an analysis or evaluation of a product or project rather than just convey information about it. We carry out the evaluation of different things in our personal and professional lives. For example, we will need to evaluate, when shopping for a new washing machine, which of the different brands and models of machines available best meets our laundry needs, budget and space requirements, among other considerations. These considerations set the evaluation criteria for helping us decide which machine to settle for. At the workplace, evaluations are carried out on staff, equipment, services, policies, and proposals to answer questions regarding performance, quality, conformance, and suitability. In each case, a well-defined set of criteria is required so that the evaluation carried out is valid.

Activity 7.2
Identifying evaluation criteria

Suggest three criteria for evaluating the following:

1. iPads
2. Electronic Road Pricing system
3. NTU's course registration system

Structure of an evaluation report

Like other types of technical professional reports, evaluation reports follow certain organisational conventions. Here, you can find a description of a typical short evaluation report. Note that, with reference to the **IBC** structure, 'Introduction', 'Description', and 'Objective' are all **I** sections, 'Evaluation' corresponds to **B**, and 'Conclusion' is, of course, **C**.

Structure of an evaluation report	
Introduction:	States purpose of the report and identifies the item evaluated.
Description:	Describes the item evaluated.
Objective:	Outlines the goal of the evaluation and the evaluation criteria.
Evaluation:	Evaluates the item by using the set evaluation criteria.
Conclusion:	Makes recommendations and reiterates key arguments for recommending the item in question.

Activity 7.3
Analysing a proposal evaluation report

Read the following excerpts from a proposal evaluation report.

CALIFORNIA-AMERICAN WATER PROPOSAL EVALUATION REPORT, NOVEMBER 16, 2013

1. This report evaluates Proposals received in response to the Request for Proposals for Design and Construction of Desalination Infrastructure for the Monterey Peninsula Water Supply Project (hereafter the "RFP"), dated 17 June 2013 and issued by California-American Water Company ("CAW"). The report then designates the "Preferred Proposer" with whom to enter into negotiations.
2. Proposals were received on 16 October 2013 from three Proposers: Black & Veatch Construction, Inc. ("Black & Veatch"); CDM Constructors, Inc. ("CDM Smith"); and CH2M Hill Engineers, Inc. ("CH2M Hill").
3. The Evaluation Team assessed the Proposals based on the following criteria listed in the RFP: (1) technical criteria (40% weighting) including project delivery, technical reliability and viability, operability, technical qualifications, and others (including Proposer interviews) and (2) business and financial criteria (60% weighting) including cost effectiveness, business terms and conditions, and financial strength.
4. The table below summarises the scores for the Financial Strength criterion for each Proposer.

Proposer	Financial Strength (2 pts)
Black & Veatch	2.0
CDM Smith	1.8
CH2M Hill	1.4

5. This criterion includes the Dun & Bradstreet rating and appraisal classification of each Proposer, their working capital and cash flow standards, and their credit lines.

6. All of the Proposers are financially capable of undertaking the Project. Among the financial factors taken into consideration, including asset bases, capital structure, and operating results, the Dun & Bradstreet rating was considered more influential and reflective of the financial strength of the Proposers. Black & Veatch and CDM Smith had the best Dun & Bradstreet rating, followed closely by CH2M Hill. Black & Veatch and CH2M Hill had the strongest capital and cash flow standards, followed by CDM Smith. Black & Veatch had the highest credit line, with CDM Smith and CH2M Hill tied for second. Details are as follows:

Proposer	Dun & Bradstreet rating and appraisal classification	Working capital and cash flow standards	Credit line
Black & Veatch	5A2= "good"	Strong	$237.7 million
CDM Smith	5A2= "good"	Moderate, but sufficient to undertake the Project	$100 million
CH2M Hill	5A3="fair"	Strong	$100 million

7. The table below summarises the final scores for both the technical criteria and the business and financial criteria as well as the total score for each Proposer.

Proposer	Technical Criteria (40 pts)	Business & Financial Criteria (60 pts)	Total
Black & Veatch	35.8	50.2	86.0
CDM Smith	36.1	59.8	95.9
CH2M Hill	40.0	48.0	88.0

8. While all three Proposers are highly qualified and submitted very comprehensive Proposals, the Proposal submitted by CDM Smith was determined to be the most advantageous. The primary factors favouring CDM Smith are its significant cost effectiveness, exceptional acceptance of the terms and conditions included in the draft design-build agreement (the "Draft DB Agreement"), and a strong overall technical Proposal.

9. It is the Evaluation Team's recommendation, therefore, that CDM Smith be designated the Preferred Proposer for the commencement of negotiations.

Adapted from California American Water (2013)

1. Identify the paragraphs of this report that correspond to the following sections.

	Paragraph(s)
Introduction:	
Description:	
Objective:	
Evaluation:	
Conclusion:	

2. Answer the following questions.

a. What were the criteria used for assessing the four proposals?	
b. Which criterion is discussed in paragraphs 4 to 6?	
c. What are the words used to indicate the evaluation in paragraphs 6 and 8?	
d. What evidence is provided for the evaluation in paragraph 6?	
e. What are the other words in the rest of the report that indicate an evaluation? How are they different from words like *amazing*, *awesome*, *wonderful*, *awful*, *terrible*, *so-so*, and *not bad*?	

As we have learnt in Unit 2, a successful proposal manages to persuade its readers that the concept, product, or service it describes effectively meets the needs of the readers or addresses a significant problem or issue. In the next activity, we shall evaluate a proposal.

Activity 7.4
Preparing an evaluation report

1. Read the following proposal about an innovation titled 'Window Sensor for the Elderly'.

Title of proposal: Window Sensor for the Elderly

Background

All of us will age one day and although we may look forward to it, there could be some impending problems. Aging population in one of the concerns that Singapore is facing today. According to The Straits Times, the number of elderly staying alone in Singapore has been increasing and it might reach 83,000 by 2030. This figure excludes those elderly who are currently staying alone at home while their children are out for work in the day.

Problem

Opening and closing the windows may be an easy task for many. However, it is a challenge for the elderly who are disable, frail or suffering from dementia. In the event of rain, they may fall down while rushing to close their windows. Wheelchair-bound elderly might experience difficulty to even reach the window handles. Furthermore, during windy monsoon season, elderly with rheumatoid arthritis would experience joint pain which would inhibit their mobility. Not all elderly will have daily assistance and many live alone which can lead to many other problems.

Solution

This system consists of three main components: the sensor, electric actuator and remote control. All these devices are made of waterproof materials and the system is equipped with Bluetooth transmitter that has been programmed with an address that link to a particular device within 10m. A 3-in-1 wireless sensor (150 X 120 X 100 mm) will be used to monitor the humidity, detect rain shaped stick. Whenever rain or wind (20MPH and above) is detected, the actuators would receive information to close all the windows. If the humidity is not within the healthy range (35%-50%), the

windows will remain opened. The degree of the window opening can be adjusted manually by using a remote control. If the user is on holiday, the system can also be switched off manually.

Benefits

With this system installed, the elderly can have a peace of mind to enjoy their activities at home and sleep better without having to worry for any impending rain. Wheelchair bound elderly can also control the windows without any hindrance, empowering them to be more confident and independent. This will also help them live longer and have fulfilling lives. This would also lower the cost of healthcare in the long run as this has been continuously rising.

Implementation

The following methods will be taken to implement this system:

1. We have to collaborate with actuator, remote control and sensor companies, and integrated into one system that is elderly friendly.
2. Prior to the installation, we have to visit the consumer's house to determine whether it is feasible to install the system and the number of sensors required.
3. Different actuators will be used for different types of windows e.g., sliding and casement windows are using linear and chain actuator respectively.
4. The installation process will not be complicated as it is an add-on product that is compatible with existing windows.

Costs/Budget

Electric actuator (per window frame): $50
3-in-1 sensor (per unit): $80
Remote control (per unit): $25
Total cost depends on the total amount of the actuator(s) and sensor(s) installed.

Conclusion

As technology continues to advance, we should apply such innovation to provide solutions for our predecessors who could no longer manage their daily lives well. With the Intelligent Windows for Housing, the elderly no longer have to worry for impending rain and can adjust their windows with just a click. Besides from improving the quality of these elderly' lives, we can contribute back to the society, making a better environment for everyone.

References

Seniors living alone may rise to 83,000 by 2030. (2012, April). Retrieved September 28, 2015, from http://app.msf.gov.sg/Press-Room/Seniors-living-alone-may-rise-to-83-000-by-2030

Statman.info. (n.d.). Retrieved September 28, 2015, from http://www.statman.info/conversions/wind_force.html

What Does Rheumatoid Arthritis Feel Like? (n.d.). Retrieved October 4, 2015, from http://www.healthline.com/health-slideshow/what-does-rheuamtoid-arthritis-feel

Adapted from Anon. (2015)

2. In groups, evaluate the proposal using the questions below.

Table 7.1: Proposal evaluation

Proposal sections/aspects	Evaluation
Background	
• Is there an introduction to the general topic without specific mention of the problem?	

Problem
- Is a specific problem identified? Is it significant?

Solution
- Is the solution described technical, (somewhat) original, and practical?
- Does the solution address the problem(s) identified earlier?
- Is there a detailed description of the product and its parts, and how it works?

Benefits
- Are the target groups and specific advantages of the product indicated?

Implementation
- Is there a brief description of how the product/service will be developed?
- Are the resources required for the product listed?
- Is a timeline for development of the product provided?

Costs
- Is there a breakdown of the costs involved?
- Are the costs realistic?

Conclusion
- Is there a brief reiteration of the problem, solution, and benefits?
- Does the proposal end with an effective closing statement?

Language
- Is the language used formal?
- Is the proposal clear and persuasive?
- Are there any glaring errors in grammar, spelling, punctuation, etc.?

Organisation
- Is the proposal well-organised? Are details and ideas covered in the appropriate sections of the proposal?

3. In your groups, write a draft of your evaluation report using the outline given below. Criteria for evaluation could relate to the clarity of writing, strength of arguments, organisation of information, appropriateness and correctness of language, and usefulness of product, among other relevant criteria.

[Report title]

Introduction
- Purpose of the report
- Name of the proposal evaluated
- Author, Affiliation

Description

- Problem
- Solution

Objective

- Objective of the evaluation
- Criteria used

Evaluation

- Specific criteria
- Evaluation of the proposal based on the criteria
- Evidence from the proposal to support the evaluation
- Elaboration of how the evidence supports the evaluation

Conclusion

- Summary of the strengths and weaknesses
- Overall evaluation
- Recommendations, if any

Activity 7.5
Discussing Assignment 2

Read the guidelines for Assignment 2. Be sure you are clear about them, and raise any questions you may have with your tutor.

Summary

In this unit, you have learnt how to write short reports. Specifically, you have learnt how to write evaluation reports, which are a type of analytical report. You have also learnt that effective evaluation reports are organised logically, with parts that identify the background and subject of evaluation, evaluation criteria, arguments that support the evaluation, and the final recommendations.

Preparing for Unit 8

The next tutorial is on preparing oral presentations. Please read this unit beforehand as the tutorial will focus on classroom activities. There will be no class time for reading. Please prepare at least 3 slides based on the Background and Problem sections of your technical proposal (Assignment 2) and upload them to NTULearn before the lesson. Watch the video for Unit 8, and complete the answer sheet before coming to class.

References

Anon. (2015). *Window sensor for the elderly*. (HW0188 Report). Unpublished manuscript, School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore.

California American Water. (2013). *Proposal evaluation report: Request for proposals for design and construction of desalination infrastructure for the Monterey Peninsula water supply project.* Retrieved 10 May 2018 from http://www.mpwmd.net/GovernanceCommittee/CAWNotifications/2013/Cal_Am_Notification_3_Proposal_Evaluation_Report_MPWSP_Desal%20Infrastructure_%20final_11_6_13.pdf.

Cheung, D., & Li, S. Y. (2001). Writing short and informal reports. In C. P. Khong & C. Heah (Eds.), *Essential communication strategies for engineers* (pp. 182-210). Singapore: Prentice Hall.

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Unit 8

Preparing effective presentations

Contents Unit 7 Unit 9

Introduction

Oral presentations at the workplace cover a variety of topics and focus a great deal on accuracy and objectivity. You will have to know how to tailor your presentation depending on the context.

Learning outcomes

After completing this unit, you should be able to:

1. analyse the purpose, audience and context of workplace presentations;
2. organise the content for workplace presentations; and
3. prepare suitable slides for presentations.

Activity 8.1
Assessing a professional presentation

Video activity (CNET, 2018)

Watch the video of the 2018 launch of the new Apple iPad and comment on the following aspects of the presentation:

https://www.youtube.com/watch?v=MKhiPRQ4Alo

Main purpose

Audience

Slide text

Slide visuals

Preparing an oral presentation

There are five steps to preparing a presentation at the workplace, the first three of which will be covered in this unit, and the next two in the next unit.

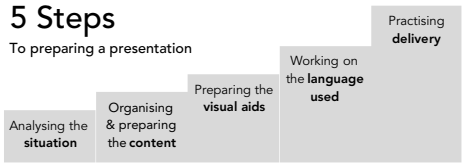


Figure 8.1: 5 steps to preparing a presentation

Analysing the situation

As with other communication tasks, the three main elements of the situation you need to consider in preparing for a presentation are as follows:

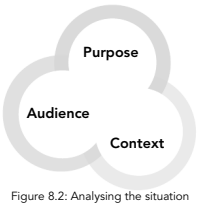


Figure 8.2: Analysing the situation

Analysing the purpose

You will first need to identify your main purpose in delivering the presentation, which is usually one of the following:

- to ***inform***,
- to ***instruct***, and/or
- to ***persuade***.

Though your presentation may have one main purpose, there are likely to be some aspects of the other purposes listed above. For example, in order to persuade an audience, you will need to provide some information.

Activity 8.2

Identifying the main purpose of presentations

For each example of a presentation below, identify the main purpose of the presentation.

Product proposal presentation

Purpose :

Briefing about new procedures

Purpose :

The main purpose of your presentation will affect the language you use as well as the structure of the presentation, as we shall see later.

Analysing the audience

As an effective communicator, you may need to give oral presentations in an academic, professional or public setting. Before you start working on your presentation, you need to assess the following aspects of your audience:

- What is their ***role*** in relation to the company, organisation or institution?
- How much ***professional knowledge*** do they have about your topic?
- What do they ***need to know?***
- In what ***format*** would they prefer to receive information such as data or statistics?
- What will their ***attitude*** be? Are they likely to be receptive, neutral, or resistant to your presentation?

In addition, you will have to determine whether you have a homogeneous audience or a mixed one. In the case of the latter, it may be better to tailor your presentation to decision-makers or the more influential members of the audience while not ignoring other audience members completely.

Activity 8.3
Analysing the audience

If you were to present the proposal for the *Sunscreenr* or the *Soundbender* to angel investors such as those in the Shark Tank panel as well as to your university professors, what would you have to consider in terms of their knowledge levels and information needs?

Angel investors	**Knowledge level:**
	Information needs:
Professors	**Knowledge level:**
	Information needs:

Analysing the context

Finally, you will need to consider other aspects of the presentation such as the channel, time, and venue.

- **Channel:** Will you be presenting to a live audience seated in front of you or will it be a video-conference?
- **Time:** How much time will you have? Will you have enough time to present all you want to? What time of the day is the presentation? Are people likely to be alert or tired?
- **Venue:** Will you be presenting in a small meeting room or a large auditorium? Will you be seated or standing? Will you be able to see everyone's reaction?

Organising and preparing the content

Having analysed the context, you can work on the content of the presentation. You will need to make the following decisions:

- What is your ***main message***?
- How should the content be ***organised***?

Organising the content

After you have decided on the content, you will need to decide on the order in which to present the various parts. A well organised presentation typically has three parts: Introduction, body, and conclusion.

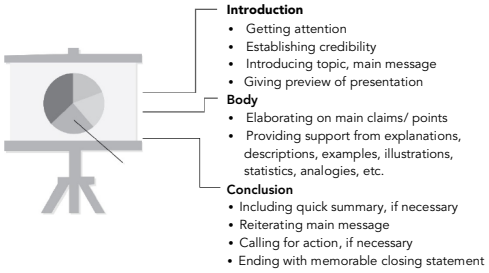


Figure 8.3: Organising the content

For most presentations, especially informative ones, the main message is presented at the beginning and the rest of the presentation is an elaboration on the main message. This is an efficient way of conveying information as the audience is primed at the beginning to look out for what is relevant later in the presentation.

For persuasive presentations, however, arousing the interest of the audience and preparing them to be receptive to the final message before it is presented and elaborated on may work better.

Preparing visual aids

Visual aids are useful in getting the audience's attention, reinforcing the verbal messages, and making information more accessible. However, they can also distract the audience from the presenter and the content of the presentation if they are not properly prepared or effectively used. While presentation slides are the most common visual aids used during presentations, there are other options such as hand-outs, product samples, small-scale models, and physical or electronic demonstrations. In this unit, we shall focus on preparing effective slides, more specifically PowerPoint slides, as they are the most commonly used slides.

An important point to consider is the ***number of slides*** you prepare. In some cases, you may be told the maximum number of slides to prepare. Otherwise, it is wise to prepare an appropriate number of slides, such that you spend about one or two minutes on each slide. If you talk for too long about one content-heavy slide, your audience may get restless. Conversely, using too many slides and spending too little time on each can be unsettling for the audience.

Preparing presentation slides includes working on the following aspects of slides:

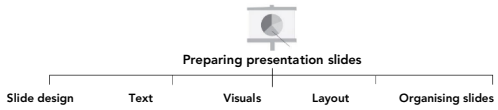


Figure 8.4: Preparing presentation slides

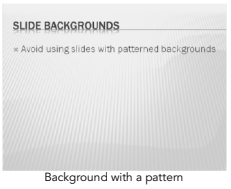
Choosing a slide design

If you are interning with or working for a company, you may be expected to use the official company template for your presentation slides. Otherwise, you can choose a design available in PowerPoint and then modify it, or create your own design from scratch using the Slide Master.
Using a standard PowerPoint design without modifying it is an attractive option if preparation time is limited. However, if you choose a popular slide design, you risk making your slides look boring and predictable. A better option, which will not involve much more preparation time, would be to modify an existing design slightly, especially in terms of colour.

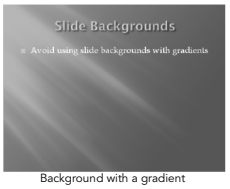
In choosing or preparing a slide design, you should consider the following:

Background:

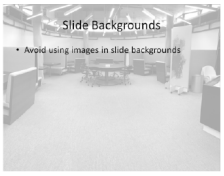
- A plain background with a single tone is easier to work with and less distracting than one with patterns, a colour gradient, or images (Fig. 8.5).
- Light colours are easier to work with and to print than dark colours.



Background with a pattern



Background with a gradient

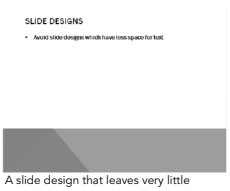


Background with an image
Figure 8.5: Slide backgrounds

Design features:

- A slide template with simple design features, such as lines, waves or shapes, near the edges of the slide is easier to work with than slides with irrelevant or complicated design elements that are distracting and/or take up more space in the slide (Fig. 8.6).

Complicated slide design



A slide design that leaves very little space for content

Figure 8.6: Slide design features

Colours:

- You should choose professional colours and avoid those that are too bright or too dull.
- Colours should complement rather than clash with each other.
- There should not be too many colours in the slide design — you should be cautious about using more than three colours.

Text:

- The colour of the text should have adequate contrast with the colour of the background (Fig. 8.7).
- The main text of the slide should be in a Sans Serif font rather than a Serif font. Serif fonts have markings at the ends of some letters which make them more difficult to read on slides though they work well in print (Fig. 8.8).
- Fanciful fonts, especially those that mimic cursive handwriting, should be avoided for a more professional feel to your presentation.
- Bullets should be simple and not draw attention away from text. In addition, lower level bullets should be less prominent than higher level ones (Fig. 8.9).

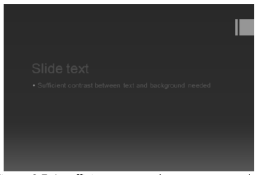


Figure 8.7: Insufficient contrast between text and background

Figure 8.8: Extra markings in Serif fonts

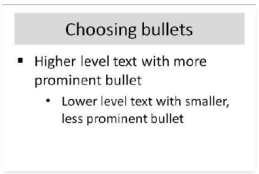


Figure 8.9: More prominent higher-level bullets

Working on slide text

To make the text in your slides easy to read, you should limit the amount of text in your slides, ensure the font size is appropriate, and format your text effectively.

First, it is tempting to be economical with slides and to squeeze as much information as possible into as few slides as possible. One consequence is having too much text in slides, which will be a strain on the eyes of your audience. There are at least two ways to ensure the amount of text in a slide is appropriate:

- Follow the '**7 by 7**' rule: Do not have more than 7 words a line and not more than 7 lines of text in a slide.
- Avoid using full sentences in slides—use key phrases instead. This will also remove the temptation to read off slides, a common pitfall for inexperienced presenters.

Activity 8.4
Avoiding sentences in slides

Convert the following sentences into a series of phrases you can include in a slide:

Complementary colours, such as red and green, are those opposite each other on the colour wheel.

While a combination of complementary colours can add vibrancy, it can also be jarring if appropriate shades are not used.

Such colours can be used together in moderation to emphasise small sections of an image but should be avoided in relation to text.

Next, ensure all the text in your slides can be read, including labels for visuals and data on charts. For most fonts, you should use at least 20 points for your smallest text. Be cautious about using WordArt as there is the danger of the text drawing too much attention to itself.

Finally, formatting your text appropriately can make your slides more reader-friendly.

Here are some guidelines:

- Use title case only for slide titles (Fig. 8.10). This is when you use capital letters to begin key words even if they are not the first word in the phrase, clause or sentence. For the main text in your slides, use sentence case, with capital letters being used only for the first words of the clause, phrase or sentence and for proper nouns. Overusing title case can make the main text difficult to read.

Figure 8.10: Title case and sentence case

- Avoid using UPPER CASE for whole words, phrases, clauses and sentences as there will be too much text drawing attention to itself. Similarly, use **bold** or underlining only to emphasise key words, phrases or clauses.
- Minimise your use of *italics* as the slanted text and thinner font make text difficult to read.
- Adjust your line spacing to ensure that your text does not look too cramped or that the lines of your text are not too far apart.

Working on slide visuals

Presenting slides that only contain text does not fully exploit the potential of using slides. However, some caution is needed with including visual elements, especially for professional presentations. Visuals need to be ***professional***, ***clear***, and ***support your point*** effectively.

To make your presentation more professional, avoid using Clip Art, cartoons, or unnecessary animated GIFs (Graphics Interchange Format). Instead, use relevant images, charts, diagrams, or videos appropriately. In addition, clear visuals are needed to complement what you have to say so you should avoid using images with low resolution or images with watermarks.
Charts and diagrams should not be so complex that your audience struggles to make sense of them. If necessary, consider the following strategies:

- Break up complex visuals so you make one or two points with each one.
- Present data in logical order, such as from smallest to largest.
- Remove additional details that would complicate your slides and provide them in hand-outs instead.
- Highlight significant sections of the visuals by using more striking colours, callouts, arrows, surrounding shapes, and expanded views to draw attention to them.

To make charts easier on the eye, you could also try the following:

- Limit the number of lines, bars, columns, or pie sections in a single chart.
- Remove unnecessary gridlines.

- Remove unnecessary decimal points.
- Simplify large numbers by indicating them in thousands, ten thousands, hundred thousands, or millions, for example.
- Avoid the use of three-dimensional charts and complicated chart types, such as scatter charts.

Working on the layout

Once most of your slides have been prepared, you should check the layout to ensure that the slides are not too cramped or have too much empty space in the wrong places. If a slide is too cramped, you could consider transferring some of the content to another slide.

If you have a lot of empty space in a slide, you could try the following:

- Combine the content with that of the next slide if it is possible.
- Increase the font size slightly.
- Add an appropriate image to fill up the space.

Some presenters add extra space between bullet points to make the text fill up space but this has the effect of drawing even more attention to the fact that the slide has little content.

Additionally, to make your slides neater, you should ensure that there is sufficient space between text and visuals as well as design features of the slide design. Ideally, neither text nor visuals should cover any part of the design features of the slide template.

Tapping on useful options

To make the slides both user- and audience-friendly, you could insert slide numbers and footers as well as use animation with some restraint.

Slide numbers are useful for presenters as they tell you which point of the presentation you are at, especially if you know your total number of slides. They are also helpful if you want to move to a particular slide either during your presentation or during a question-and-answer session. If you have a hard copy of your slides, you do not have to go through a number of slides to reach the desired one—you just have to look for the slide number, type it in and press 'Enter'.

Footers allow you to indicate the title of your presentation, which is a good reminder for your audience, or to indicate the structure of your presentation, if your presentation is not too long and complicated. In the latter case, the audience will be able to determine which point of the presentation you are at by referring to the condensed agenda list in your footer.

Animation can be used to hide content until your audience needs to see it. If you have a significant amount of material on a single slide, showing it all at once can be overwhelming for your audience and could lead to the audience ignoring you until they have read all the material on the slide. On the other hand, revealing content more gradually ensures that your audience pay more attention to you than to your slides.

However, some presenters do not use the animation feature judiciously so the animated content becomes distracting and unprofessional rather than helpful. This is particularly the case with animation that involves twirling, bouncing, and turning text or images. The safest options for using animation are those that involve fading in and out, or appearing and disappearing. In some work environments, though, the use of animation is frowned upon so it is best to check what the acceptable practices are. Additionally, animation may pose a problem in some web-conferencing contexts, especially if there is a lag.

Activity 8.5
Preparing effective slides

Students will now take turns to show their slides to the rest of the class, who should provide feedback on the following aspects of the slides:

- choice of slide design, slide background, and colour choices;
- choice of fonts, font size, line spacing, text colour, and bullets;
- quantity of text, use of phrases and clauses rather than sentences, and text formatting (i.e., use of uppercase, bolding, italics, underlining, etc.);
- adequate use of visuals, and the quality of visuals;
- slide layout and use of animation.

Inserting organising slides

Apart from your main content slides, other types of slides are either necessary or useful. These include a title slide, an agenda or preview slide, section header slides, a summary slide, and a concluding slide.

The **title slide** should include the following elements:

- a concise and informative title of the presentation, one that will get the attention of your audience;
- names of the presenters, and their job titles, if any;
- the company or organisation they represent; and
- the date of the presentation.

The **agenda** or **preview slide** indicates the structure of the presentation, while **section header slides** are useful for both presenters and the audience for indicating the start of a new part of the presentation. Section header slides could either contain the title of the relevant section or could show the whole structure of the presentation with the relevant section highlighted.

The final slides include the **summary slide** towards the end of the presentation, which helps the audience remember the main points of the presentation as well as the main message, and a **concluding slide** which provides an explicit signal that the presentation has ended.

Summary

Preparing effective presentation slides is often challenging and time-consuming but the benefits during the presentation outweigh these disadvantages. The process begins with a careful consideration of your **audience** and **main purpose** in presenting, and clear identification of your **main message**. Consideration of other factors such as the **channel**, **venue**, and **time** constraints is also crucial. Once these issues have been addressed, the content of the presentation can be transferred to your slides and organised appropriately. Make sure your slides are friendly to both the audience and presenter by choosing an effective slide design and working on the slide layout and the use of text and graphics.

Preparing for Unit 9

The next tutorial is on delivering effective presentations at the workplace. Please read this unit beforehand as the tutorial will focus on classroom activities. There will be no class time for reading. Please use the feedback you received to work on the slides you prepared for this tutorial and upload the modified slides to NTULearn before next week's lesson. Watch the video for Unit 9, and complete the answer sheet before coming to class.

Reference

CNET. (2018, March 27). *Apple's new iPad: Event highlights* [Video file]. Retrieved 10 May 2018 from https://www.youtube.com/watch?v=MKhiPRQ4Alo.

Contents Unit 8 Oral presentation checklist

Unit 9

Delivering effective presentations

Contents Unit 8 Oral presentation checklist

Introduction

Having prepared effective slides, the next step will be to present them convincingly to your audience. For some presenters, this is nerve-wracking but this nervous energy should be tapped on to deliver a dynamic presentation that engages your audience.

Learning outcomes

After completing this unit, you should be able to:

1. prepare yourself adequately for presentations;
2. use appropriate language for professional presentations; and
3. use your voice as well as nonverbal communication to engage your audience.

Activity 9.1
Assessing delivery of a professional presentation

Video activity (CNET, 2018)

Watch the video of the 2018 launch of the new Apple iPad again and comment on the following aspects of the presentation:

https://www.youtube.com/watch?v=MKhiPRQ4Alo

Language used
Volume, clarity
Expressiveness
Body language

Delivering a presentation involves consideration of the following:

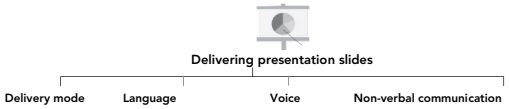


Figure 9.1: Delivering presentation slides

Choosing the right mode of delivery

Some presenters with language proficiency issues sometimes memorise their carefully prepared and edited speeches for a presentation so they do not run the risk of stumbling over words or committing embarrassing grammatical errors. However, audience engagement is often affected by a lack of spontaneity as well as the effort required to recall the speech.

Other presenters prepare a manuscript for their presentation, and read from it almost word-for-word. However, this results in little or no eye contact with the audience so audience engagement is minimal.

Transferring most of your presentation script to presentation slides is even less advisable. Not only will your slides become text-heavy and less reader-friendly, but you will also end up reading from your slides. This is even worse than reading from a manuscript because the audience can read the slides for themselves and are even more likely to feel bored, if not insulted.

Instead of memorising a script, reading from a script or reading from slides, using a more engaging style of delivery is recommended. With this mode of delivery, the presenter refers to the slides as the need arises, thereby ensuring more eye contact with the audience and a higher level of engagement.

The **'golden rule'** here is never to read from your PowerPoint slides word-for-word.

Choosing appropriate language

Following an oral presentation is more challenging than reading a document because the audience cannot re-read something they did not hear or understand. Since you are speaking live, you must maintain your listeners' attention and help them follow your presentation and its structure. This can be achieved by using:

- shorter sentences with fewer nominalisations and passive constructions;
- transition words; and
- verbal sign posts.

Shorter sentences with active verbs are easier to follow. For example, a sentence like this is long and difficult to read:

> With better healthcare options available and greater awareness of the need for a healthy lifestyle, people are living longer but the needs of an ageing population have to be met to avoid burdening younger generations already struggling to survive in an increasingly competitive global economy.

If we use shorter sentences, this text – which is written to be spoken aloud – might be rewritten in the following way:

People are living longer because they are more aware of the need for a healthy lifestyle and have better healthcare options available.
However, this has led to an ageing population who have particular needs and who rely on younger generations to meet those needs.
As this group is already struggling to survive in an increasingly competitive global economy, they may see the elderly as a burden.

Transition words help your sentences and speech flow more smoothly and establish logical links for the audience to follow. Typical transition words in spoken presentations might include 'as a result', 'consequently', 'however', 'so', 'then', 'in addition to', etc.

Verbal signposts tell your audience about the structure of your presentation, by reminding them of what you have just discussed and indicating upcoming content. Here are some examples of verbal signposts:

- 'The next segment of my talk presents three reasons for …'
- 'Let's now consider the causes of …'
- 'Thus far, we've talked solely about … now let's move on to …'
- 'I've discussed the three major problems of X, so let us look at some plausible solutions …'
- 'Let us review the main problems we've just discussed …'

Verbal signposts are especially important in team presentations. When team members hand over the presentation to other team members, they should ensure the transition is smooth by providing a brief summary of what they have presented before introducing the next presenter and indicating what will be presented.

Apart from using particular language features to help your audience follow your presentation, you should also use language to convey your ideas accurately, establish credibility, and display your confidence.

Accurate expression of technical content can be achieved in the following ways:

- using appropriate technical jargon, explaining them for a non-technical audience if necessary; and
- being specific about measurements rather than using vague quantifiers such as 'about', 'around', and 'quite' in expressions such as 'about 25 metres long', 'around three metres away', and 'quite wide'.

You can present yourself as a **credible speaker** by adopting the following strategies:

- using formal, grammatically correct language and avoiding colloquial expressions;
- avoiding unnecessary intensifiers and superlatives such as 'very, very good', 'really awesome', and 'absolutely amazing'; and
- not offering apologies for possible shortcomings at the beginning by saying 'I'm sorry if those behind can't see this', 'I'm really tired so I can't …', or 'These slides are a bit raw because I didn't have time to touch them up'.

You can display your **confidence** or at least avoid drawing attention to your nervousness by taking note of the following:

- Limit your use of hedging devices such as 'I think …', 'Maybe, …', and 'I'm not sure but …'.
- Avoid displaying your anxiety by reducing your use of fillers such as 'er', 'um' and 'ah'.
- Do not reveal how tense you are with expressions such as 'I hope you can't see how nervous I am'.

Using your voice effectively

Your voice is a crucial part of the presentation so you need to ensure you are loud enough and are articulating your words clearly, pronouncing them accurately, speaking at a reasonable pace, using pauses to punctuate your speech, varying your intonation, and stressing important words. The next few activities will help you identify your strengths and weaknesses.
To ensure **audibility** and **clarity**, you should face your audience and keep your head up so your voice travels in the right direction. You should also avoid mumbling and slurring by putting some effort into articulating your words.

Activity 9.2
Ensuring audibility and clarity

Two or three pairs of students will now present their proposal but without projecting their slides. The rest of the class should face the back so they can only hear the presenters without looking at them. The presenters should read off their slides slowly, converting phrases and clauses into complete sentences, while the rest of the class tries to record in writing what they hear as accurately as possible. At the end of each presenter, the audience can compare their notes with what is on the slides.

Pauses are useful for telling your audience how your ideas and sentences are structured, and for adding emphasis. Shorter pauses are usually reserved for the ends of clauses and long phrases while longer pauses are used at the ends of sentences and important points. Presenters who are nervous sometimes speak at a faster **pace** so you may need to consciously tell yourself to slow down. If the pace is too slow, however, your audience may get restless.

Activity 9.3
Adopting the right pace and using pauses

Read the following sentence and decide where you should have pauses and whether they are shorter or longer pauses:

> People are living longer because they are more aware of the need for a healthy lifestyle and have better healthcare options available. However, this has led to an ageing population who have particular needs and who rely on younger generations to meet those needs.

While pauses are a subtle way of emphasising important words and ideas, stressing relevant words achieves the same effect more obviously. **Stress** is usually indicated by increasing volume and pitch, and drawing out the pronunciation of the word slightly. Changes in **intonation** are also useful for making your speech expressive rather than monotonous, and for indicating sentence structure: sentences usually end in falling tones while a rising or a fall-rise tone is used to indicate a pause that is not the end of an utterance.

Activity 9.4

Stressing important words and varying your intonation

Read the following sentence and decide which words are more important and need to be stressed.

People are living longer because they are more aware of the need for a healthy lifestyle and have better healthcare options available. However, this has led to an ageing population who have particular needs and who rely on younger generations to meet those needs.

Using nonverbal communication

Nonverbal communication is another tool you can use to engage your audience. This includes facial expressions, eye contact, position, movement and gestures.

Eye contact is important for showing awareness of and interest in your audience. You should have eye contact with people in different parts of the room during your presentation though maintaining longer eye contact with friendlier faces will encourage you more. Presenters who read off their slides have lower audience engagement partly because there is limited eye contact and partly because the audience are able to read the slides for themselves.

Using **facial expressions** appropriately makes your presentation livelier because it indicates commitment to what you are saying. Conversely, speaking without facial expressions can suggest you do not have much interest in your topic.

You can also use **gestures** to add expression to your presentation and to avoid being too static. However, you have to commit to your gestures so they are not perceived as weak gestures, and avoid repetitive or over-rehearsed gestures. You also need to avoid putting your hands in your pockets, clasping your wrists or elbows, or displaying other gestures that indicate how tense you are. In addition, if you use a laser pointer, you need to do so with a steady hand and point at specific sections in your slide, rather than wave it about randomly.

Adopting an upright **posture**, whether while seated or standing, shows respect for your audience and improves people's perception of you. Slouching, leaning on walls, or putting your weight on one leg can contribute to an overall image of sloppiness.

Where you stand in relation to your audience and **how much you move** can affect how engaged your audience is. Nervous presenters often stand far away from their audience and stay rooted to a spot so they feel less intimidated. On the other hand, confident presenters reduce the distance between themselves and the audience and move around to present a more dynamic image that sustains interest in the presentation. You have to be careful, though, not to block anyone's view of your slides, not to stand in the projection, not to show your back to your audience, and to avoid excessive, distracting pacing or movement.

Activity 9.5
Delivering presentations effectively

You will now take turns to present your proposals. The rest of the class should evaluate the presenters in terms of the following:

- not reading off the slides, use of shorter sentences, use of transition words and verbal signposts, accurate expression, levels of formality and objectivity, and levels of confidence;
- facial expressions, eye contact, reading off the slides or looking excessively at the slides, and gestures; and
- posture, where they stand, and whether they move effectively.

Handling questions

Most presentations end with a question-and-answer session. Here are a few tips for handling this session:

- Take questions from different parts of the room.
- Wait till the questioner has completed asking his or her question before answering it; it is rude to interrupt.
- Acknowledge questioners with eye contact, and thank them for their questions.
- Repeat the question for the benefit of others who may not have heard the question and to ensure you have heard and understood the question correctly. This also gives you time to think of answers to the questions.
- Take note of questions with various parts or multiple questions masquerading as a single question, and ensure you address the significant issues.
- Admit to not being able to answer the question if this is the case, and assure the questioner that you will follow up on the question after the presentation.

Additional tips on presentations

The key to delivering a good presentation is practice. Rehearse your presentations as many times as you can, ensuring your presentation does not exceed the time allotted. Here are other tips for ensuring successful delivery of your presentations:

- **Have a hard copy and an additional soft copy** of your slides with you on the day of the presentation in case of issues with the equipment.
- **Check the equipment** before your presentation starts to ensure there are no issues with compatibility, especially in terms of software.
- **Ensure consistency** in design and coherence of content for team presentations. Also remember to be silent during a team member's presentation and to be ready to offer assistance if needed.

Activity 9.6
Discussing Assignment 3

Your tutor will go through Assignment 3 and explain the guidelines. Raise any questions you may have with your tutor.

◀ Contents Unit 8 ◀ ▶ Oral presentation checklist

Summary

In this unit, you learnt a number of useful techniques for making oral presentations, including how to use your voice as well as non-verbal communication to engage your audience. **Remember the 'golden rule' – never read from your PowerPoint slides word-for-word.**

Reference

CNET. (2018, March 27). *Apple's new iPad: Event highlights* [Video file]. Retrieved 10 May 2018 from https://www.youtube.com/watch?v=MKhiPRQ4Alo.

Oral presentation checklist

Component	Check ✓	Remarks
Content & organisation		
• Includes **an appropriate opening:** Gets attention, introduces topic, previews presentation • Elaborates on **main claims:** Explains claims clearly and provides adequate support/ evidence; organises claims logically • Ensures the **transition** between presenters is not abrupt • Provides an **effective closing:** Offers a brief summary, reiterates the main message, indicates action to be taken, closes with a memorable statement		
Delivery		
• Uses **language** effectively: transition words and verbal signposts, grammatical accuracy, accurate and confident expression, fluency • Uses **voice** effectively: volume, articulation, pace, use of pauses, varied intonation, word stress • Uses appropriate **body language**: posture, position, movement, facial expressions, eye contact, gestures • Establishes **rapport** with audience • **Hands over** to/ takes over from other presenter smoothly • Uses **equipment** confidently • Adheres to **time limit**		
Visual aids		
• Chooses an appropriate **slide design** used consistently by both presenters: background, colours, fonts • Uses **text** effectively: quantity, parallel phrases, font size, formatting • Uses clear **visuals**: professional, accessible, relevant • Ensures a neat **layout** • Uses **animation** appropriately • Has an appropriate **number of slides**; includes title, agenda, summary and concluding slides		

Remarks

Contents Oral presentation checklist Week 13 tutorial

Week 12 and 13 tutorials

In-class presentations

(Assignment 3: Oral presentation)

Tutorials for Weeks 12 and 13 have been set aside for you to deliver your presentation for Assignment 3: Oral presentation. Your tutor would have informed you by Week 11 whether you are presenting in Week 12 or 13. Make a note of the week you are presenting. To prepare for your presentation, please read the guidelines for Assignment 3 carefully. You can also use the Checklist to plan your presentation.

On the day of your presentation, each presenter should download a copy of the HW0188 Effective Presentation Feedback Form from the main HW0188 NTULearn course site. Print the form, fill in the required information, and pass the form to your tutor at the start of the lesson.

Note: In the second part of the tutorial in Week 13, the course will be reviewed.

Contents Week 12 and 13 tutorials Course Assignments

Week 13 tutorial

Course review and feedback

In our final class of the course, we shall review concepts and skills learnt during the semester. Think about what you have learnt and how you can apply such techniques to your own communication. Be prepared to share this with the class.

We hope you have enjoyed HW0188 and look forward to teaching you again when you take Engineering Communication.

Contents Week 13 tutorial General Instructions

HW0188

Effective Communication

Course assignments

Contents Course Assignments Declaration of Academic Integrity

General instructions

HW0188 Effective Communication is a non-examination course. Your performance will be assessed through 3 assignments and class participation. The breakdown of the course assignments is presented in the table below:

Assignment	Word Limit/Duration	Type	Weighting
Assignment 1: Short proposal	800 words	Paired	25%
Assignment 2: Short evaluation report	500 words	Individual	30%
Assignment 3: Oral presentation	5 minutes/presenter	Paired	30%
Class participation	Weeks 2 - 13	Individual	15%
Total			100%

Please read the following instructions carefully:

1. Submit a soft copy of your written assignments (Assignments 1 & 2) through the Turnitin link in your NTULearn tutorial site AND a hard copy of the assignments to your tutor.
2. Type your assignments in Times New Roman, font size 12, and use double-space.
3. Attach the Declaration of Academic Integrity Form to your assignments before submission.
4. Please upload a soft copy of your Assignment 3 presentation slides to your NTULearn tutorial site.
5. Please take note that the following penalties will be imposed for late submission of assignments:

   1 day after deadline: 10% mark deduction

   2 days after deadline: 20% mark deduction

   3 days after deadline: 30% mark deduction

   4 days after deadline: 40% mark deduction

   5 days after deadline: 50% mark deduction

   >5 days after deadline: Assignment will not be accepted for grading unless there is a valid reason

   Weekends and public holidays are included in counting the number of days after the deadline.

   The submission date/time of the assignment is based on the date/time the hard copy is received by the tutor, or the date/time the soft copy is successfully submitted through Turnitin, whichever is earlier.

6. Read the guidelines on academic dishonesty found at http://bit.ly/1PMaL42 and the penalties for academic dishonesty below before submitting your assignment:
   - A student who is suspected of academic dishonesty will be requested to attend an interview conducted by the coordinator of the course and his/her tutor. If the student refuses to attend the interview, his/her assignment will receive a 'fail' grade.

- If it has been established that the extent of the dishonesty is serious (i.e., a plagiarism score* of between 30% and 50%), the student's grade for that assignment will be lowered by a letter grade.
- In especially serious cases (i.e., a plagiarism score* equal to or higher than 50%), the assignment will receive a 'fail' grade.

*** Note:** The plagiarism score here is an adjusted one, as not all items identified by the anti-plagiarism software may be true instances of plagiarism. It could be due to poor referencing style.

The instructions for each assignment are provided in the following pages according to the order of the assignments.

◀ Contents General Instructions ◀ ▶ Assignment 1

Declaration of Academic Integrity

HW0188 Effective Communication

Assignment title:

Student's (official) name:

Student's (official) name:

Tutorial group number:

Tutorial day/time:

Tutor's name:

Declaration

I/we have read and understood the guidelines on academic dishonesty as found at http://bit.ly/1PMaL42 and the penalties for academic dishonesty (see General instructions), and declare that this assignment is my own work and does not involve plagiarism or collusion according to the University's honour code and pledge. The sources of other people's work have been appropriately referenced. I have also not submitted any part of this assignment for another course.

Student's signature: **Date:**

Student's signature:

Note: The assignment will not be marked unless this form is completed and signed. Penalties will be imposed for late submission and plagiarism. Please refer to the ***General Instructions*** for details.

◀ Contents Declaration of Academic Integrity ◀ ▶ Assignment 2

Assignment 1

Short proposal

Overview

Type:	Paired
Word limit:	800 words
Weighting:	25%
Deadline:	Week 8 (draft to be submitted in week 7)
Objectives:	• To practise writing short proposals • To help you develop persuasive writing techniques • To use sources correctly
Target Audience:	General

Instructions

Task

In pairs, write a short proposal offering a solution to a real life problem. It could be the development of a new product, service or process or an improvement of an existing one.

Structure of the proposal

You should include the following components in your proposal:

- The content of your proposal should not exceed 800 words and should contain the following components:
  1. Background
  2. Problem
  3. Solution
  4. Benefits
  5. Implementation
  6. Costs/Budget
  7. Conclusion
- Include at least two in-text citations.
- Provide a final references list.
- Figures and tables may be used in the proposal.
- The word count includes headings and titles of tables/figures but excludes reference list and the title of the proposal.

Please refer to Unit 2 on writing proposals.

You must pay meticulous attention to referencing conventions in your submission. Choose either the APA or IEEE referencing style. Remember to acknowledge the sources of your information. Extensive 'borrowing' of ideas without proper referencing is called PLAGIARISM. Plagiarism is a

serious offence and can result in a 'fail' grade. Wholesale copying from any source is a VERY SERIOUS FORM OF PLAGIARISM.

Submission

In Week 7, one of you needs to submit a draft of your first assignment to ***Turnitin***, as well as bring at least one copy of your draft assignment to your tutorial.

In Week 8, submit a hard copy of your short technical proposal to your tutor and a soft copy to **Turnitin** on your **NTULearn tutorial site**. Only one member needs to upload the soft copy.

Your proposal should be typewritten in Times New Roman, font size 12, and double-spaced. Include the Declaration of Academic Integrity form and a cover page indicating the title of your proposal, your names, your school name, your tutor's name, and the date of submission.

Contents Declaration of Academic Integrity Assignment 2

Assignment 1: Short proposal

Checklist

Components	Check ✓
Title • Interesting • Not too general • Not too specific	
Content & organisation	
1. Background • Introduces topic area • Narrows down to specific issues • Reviews relevant literature related to the topic	
2. Problem • Defines the problem and the need for a solution	
3. Solution • Describes the features of the solution and how it works	
4. Benefits • Points out who or what will benefit	
5. Implementation • Describes the method or procedure needed to achieve the solution • Includes timetable (if appropriate)	
6. Costs/Budget • Outlines estimated costs	
7. Conclusion • Reasserts the seriousness of the problem • Reiterates key features of the solution • Call for action	
Referencing	
Use of references • Correct and consistent style • Adequate and appropriate use • Acknowledged properly • Included in the reference list	
Reference list • Included in report • Correct and consistent style • Correct order	
Language & style	

- Good over-all structure
- Convincing and persuasive
- Well-connected paragraphs
- Smooth flow of sentences
- Appropriate use of transitional devices
- Grammatically correct
- Correct spelling
- Appropriate

Presentation

- Neatly laid out and formatted

◀ Contents Assignment 1 ◀ ▶ Assignment 3

Assignment 2

Short evaluation report

Overview

Type:	Individual
Word limit:	500 words
Weighting:	30%
Deadline:	Week 11
Objectives:	• To practise writing an evaluation report • To review writing skills you have learned in the course

Instructions

Task

You are a member of a committee responsible for evaluating proposals submitted for a technopreneurship competition. You will find one such proposal in the Assignment folder in the main NTULearn course site. Evaluate the proposal for clarity and persuasiveness to decide if it should be accepted for the competition. Write your evaluation in a short report of 500 words.

Your report should have the following structure and sections:

Introduction

- State purpose of your report.
- Identify proposal to be evaluated.

Description

- Summarise the proposal being evaluated focusing on the problem being addressed and the solution proposed to solve it.

Objective

- State the goal of your evaluation and the criteria (2 or 3) you will use to evaluate the proposal; describe each criterion briefly.

Note: Criteria for evaluation could relate to the content (adequacy, relevance), organisation, persuasiveness, clarity of the writing (e.g., expression of ideas, coherence, cohesion), appropriateness and correctness of language used. You could also look into criteria such as usefulness of product, marketability or technical feasibility, although this may require some research on your part.

Whatever criteria you use, it is key that you describe each criterion concisely.

Evaluation

- Evaluate the proposal based on the criteria stated in the Objective section.
- Support your claims with evidence drawn from the proposal.

◀ Contents Assignment 1 ◀ ▶ Assignment 3

Conclusion

- Restate main points of the report.
- Recommend if the proposal should be shortlisted.

Submission

In **Week 11**, submit a **hard copy of your evaluation report to your tutor**. A **soft copy** of your report should also be submitted through **Turnitin** on your **NTULearn tutorial site**.

Your report should be type-written in **Times New Roman,** font **size 12**, and **double-spaced.** Include the Declaration of Academic Integrity form and a cover page indicating the title of your proposal, your name, your school name, your tutor's name and the date of submission.

◀ Contents Assignment 1 ◀ ▶ Assignment 3

Assignment 2: Short evaluation report

Checklist

Components of evaluation report ✓	Check
Introduction • Is the purpose of your report stated? • Are the authors, title, and source of the proposal evaluated mentioned?	
Description • Has a concise summary of the proposal been provided? • Does your summary focus on the problem and solution?	
Objective • Is the goal of your evaluation stated? • Are the criteria (2 or 3) you used to evaluate the proposal stated and described?	
Evaluation • Are your claims about the proposal evaluated clearly stated? • Is each claim supported by evidence/reference to the proposal?	
Conclusion • Is there a restatement of the main points in your conclusion? • Is there a recommendation? • Is the recommendation clearly stated and consistent with the arguments in the body of your report?	
Language and style • Is the overall structure of your report good? • Are your paragraphs well developed and organised? • Is there a smooth flow of sentences? • Is there appropriate use of transitional devices? • Is your writing coherent and cohesive? • Are the basic rules of grammar, punctuation and spelling observed? **Presentation** • Is your report neatly laid out and formatted?	

Contents Assignment 2 Class Participation

Assignment 3

Oral presentation

Overview

Type:	Paired
Weighting:	30%
Deadline:	Week 12 and 13
Objectives:	• To practise giving an effective presentation • To improve your ability to speak persuasively

Instructions

Task

In pairs, you will give a 10-minute oral presentation of your proposal. Each presenter should speak for 4 to 5 minutes. You are expected to use presentation slides; you are each allowed 6-10 slides for your part of the presentation.

Each presentation will be followed by a short question and answer session. Presenters should be ready to answer questions raised by the audience.

Submission of slides

Upload your slides at least one day before your presentation on your *NTULearn* tutorial site.

Preparation for presentation

You are advised to test the equipment in the room where you will be presenting to make sure that your visuals work as planned. If you prefer, you may use your own laptop.
During the presentation weeks, please **be punctual for class**. Your presentation should be **consistent and cohesive in terms of content, organisation and visual display.**

Do **dress appropriately** for your presentation. Also, each of you should bring along a copy of the presentation feedback form to give to your tutor at the beginning of the class. The form should be filled in where applicable before it is handed in.

Contents Assignment 1 Assignment 3

HW0188 Oral presentation feedback form

Speaker's Name/Tutorial Group:

Proposal Title:

Criteria	Comments
Content & organisation	
• Includes **an appropriate opening:** Gets attention, introduces topic, previews presentation • Elaborates on **main claims:** Explains claims clearly and provides adequate support/ evidence; organises claims logically • Ensures the **transition** between presenters is not abrupt • Provides an **effective closing:** Offers a brief summary, reiterates the main message, indicates action to be taken, closes with a memorable statement	
Delivery	
• Uses **language** effectively: transition words and verbal signposts, grammatical accuracy, accurate and confident expression, fluency • Uses **voice** effectively: volume, articulation, pace, use of pauses, varied intonation, word stress • Uses appropriate **body language**: posture, position, movement, facial expression, eye contact, gestures • Establishes **rapport** with audience • **Hands over** to/ takes over from other presenter smoothly • Uses **equipment** confidently • Adheres to **time limit**	
Visual aids	
• Chooses an appropriate **slide design** used consistently by both presenters: background, colours, fonts • Uses **text** effectively: quantity, parallel phrases, font size, formatting • Uses clear **visuals**: professional, accessible, relevant • Ensures a neat **layout** • Uses **animation** appropriately • Has an appropriate **number of slides**; includes title, agenda, summary, and concluding slides	

Other comments:

Contents Assignment 3

Class participation

Your class participation will be assessed according to the following criteria, with (1) being poor and (5) being excellent:

1. No participation
2. Infrequent / inconsistent participation
3. Occasional participation (answers questions when asked)
4. Voluntary and regular participation
5. Always voluntary, frequent, and very insightful participation — shows understanding of the subject; Integrates ideas from the readings