
UNIT 18 WRITING SUMMARIES-3

Structure

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18.0 OBJECTIVES

In this unit we shall discuss two passages and show you how they can be summarized. After working through the unit you should be able to write summaries of the passages you read.

18.1 TECHNIQUES OF SUMMARIZING

Example 1

You are now going to read a passage about plastic materials. These have become common only during the past few decades. This passage deals with the nature of plastic materials and with the question of whether or not they cause environmental damage. Now read the passage.

The World of Plastics

- 1 Plastic has long been with us. It became well-known in the 1930's and particularly the 1940's through a great deal of publicity, as a major substitute for other materials. Since then — with far less fanfare — it has steadily increased its influence over our lives. In 1976, plastic outstripped steel to become America's most widely used material.
- 2 The basic raw materials for the manufacture of plastic are petroleum and natural gas, but plastic can also be made from coal or — if need be — even from wood. These hydrocarbon materials are processed into a waxy, mouldable (hence the word 'plastic') stuff called resin.
- 3 Environmentally, plastics have a good deal to recommend them. Plastic requires only one-tenth of the energy required to produce aluminium, and in spite of the enormous volume involved, plastic accounts for only five per cent of U.S. petroleum consumption. But plastics also present some special problems. Although the basic resin-manufacturing process presents a much cleaner face than a steel mill (there is little smoke and soot), it is also true that many of the ingredients are dangerous. Benzene, for example, which goes into the manufacture of styrene, epoxy, polyester and nylon, is a member of the dangerous family of carcinogens. Common types of plastic produce toxic gases in fires, including hydrogen cyanide and hydrogen chloride. The plastics industry counterargues that natural materials such as wood also produce toxic gases when burned, and that non-plastics may be more prone to catching fire or starting fires (as in the case of metal electrical housings). Carbon-reinforced plastics create a particular problem — when burned, they release clouds of tiny fibres that can get into electrical equipment and cause short circuits.
- 4 One concern of environmentalists is that many plastics are neither biodegradable nor can they be easily recycled, and that used plastic is increasing our already staggering solid waste and litter problem. Recycling plastic bottles does not have the economic incentive that recycling aluminium cans or even glass does, but manufacturers are working to make it more practical.

5 For all that, there is little question that there will be more and more plastic in our future. Visionary plastics enthusiasts argue that plastic houses will be commonplace 20 to 30 years from now, and, if costs drop, even plastic bridges and domes to cover whole towns could follow. And so, regardless of how we feel about it, we might as well prepare ourselves. Leo Baekeland's genie has been out of the bottle for almost 30 years now; no one is going to put it back in.

(From 'The Plastic World' by James R. Chiles, *Span*, Oct. 1986, reprinted from *Smithsonian*)

Glossary and Notes :

'biodegradable : that can be broken down by bacteria

'toxic : poisonous

'recycling : making use of used materials or waste

'Leo Baekeland : the man whose name is associated with the invention of plastic

'genie /'dʒi:nt / : a supernatural creature; a spirit

The 'genie has been 'out of the 'bottle : the expression suggests that the spirit of plastic was kept sealed in a bottle, but about 80 years ago, it managed to escape and cannot now be put back in again. This means that it is impossible to stop the development of plastic in today's world.

We are now going to make a summary of the passage by looking for the important ideas in each paragraph. This will enable us to arrive at the central idea of the passage and to separate the ideas from the illustrations of these ideas. By now you are familiar with how to identify the main points of paragraphs. Write out these main points paragraph by paragraph.

Paragraph 1 :

Paragraph 2 :

Paragraph 3 : The effect of plastic on the environment :

a) Favourable :

i)

ii)

iii)

b) Unfavourable :

i)

ii)

iii)

Paragraph 4 :

Paragraph 5 :
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If you have had problems finding the main points, we shall discuss how to do so now. Look at Paragraph 1. What does it tell us? The first two sentences say that plastic has long been with us and that it became well-known in the 1930's as a major substitute for other materials. The next two sentences say that since then its influence has increased in our lives so that in 1976 it was the most widely used material in America. The main points that we can derive from this is that :

Plastic has been used by us for a long time as a major substitute for other materials.

Now look at Paragraph 2. The basic raw materials for making plastic are mentioned here as well as the fact that it can even be made from coal or wood. The materials used are processed into a waxy substance called resin. The main point that we can derive from this is that :

Plastic is made mainly from petroleum and natural gas.

Now look at Paragraph 3. This is a fairly long paragraph and contains a number of points. In the outline suggested above, these points have been divided into those which relate to a favourable effect on the environment and those which relate to an unfavourable effect on the environment. Thus the main point of the paragraph is the effect of plastic on the environment, which is further classified into favourable and unfavourable effects.

The favourable effects on the environment are :

- i) Plastic requires much less energy to produce than other materials.
- ii) There is less smoke and soot in its manufacture.
- iii) Other materials like wood also produce toxic gases when burned and non-plastics may catch or start fires more readily.

The unfavourable effects of the use of plastic on the environment are :

- i) The ingredients used in manufacturing plastic are dangerous.
- ii) Common types of plastic produce toxic gases in fires.
- iii) Carbon-reinforced plastics can cause short circuits when burned.

Find the words and ideas that we have left out. Why have we brought in what we have and left out the rest? The major decision was the identification of the main point (stated above) and its classification into favourable and unfavourable effects. In order to do this you have to get the general sense of the whole passage. The details under favourable and unfavourable effects are less difficult to separate. Under favourable effects, point (i) has been made much briefer and more general. The figures which compare the amount of energy required to produce plastic with that required to produce aluminium, and the percentage of consumption of petrol in the production of plastic have not been included in the summary. Since only a general point is required, it is merely stated that plastic requires *much less* energy to produce than other materials. No other materials than aluminium have been mentioned, but the passage suggests that, comparatively speaking, the amount of energy required to produce plastic is very limited.

Point (ii) presents what occurs in brackets in the passage. What occurs outside the brackets, namely, 'manufacturing process presents a much cleaner face than a steel mill' is less specific than 'less smoke and soot', so the former is not used in the summary. Point (iii) is taken from lower down in the paragraph. It is classified as a favourable effect because it states that plastics don't catch fire as readily as non-plastics.

The writer does admit that there are some unfavourable effects of the use of plastics. Point (i) under this states only the general point that the ingredients used in the manufacture of plastic are dangerous. It is not necessary to bring in all the examples that are given, when writing a summary. Again, in point (ii) it is not necessary to mention the names of the gases that are released. In point (iii) also, the details about the fact that plastics can 'release clouds of tiny fibres that can get into electrical equipment' are not necessary in a summary.

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Now compare what you have written with what is given below :

Summary II : Continuous Prose

Plastic

Plastic has been used by us for a long time as a major substitute for other materials. It is made mainly from petroleum and natural gas. It can affect the environment enormously, favourably and unfavourably. The favourable effects can be stated first. They are: (i) plastic requires much less energy to produce than other materials; (ii) there is less smoke and soot in its manufacture; (iii) other materials like wood also create toxic gases when burned, and non-plastics may catch or start fires more readily. It also has effects which are unfavourable to the environment. These are: (i) the ingredients used in manufacturing plastic are dangerous; (ii) common types of plastic produce toxic gases in fires; (iii) carbon-reinforced plastics can cause short circuits when burned; (iv) plastics are not biodegradable or recyclable. Thus they add to the earth's already enormous litter problem, but attempts are being made to make recycling of plastics easier. It is felt that, whether we like it or not, the use of plastic in the future is likely to increase greatly. In fact, we may even make houses and bridges out of plastic.

You will have noticed that the two summaries, the first one written in point-form and the second written as a paragraph, have much in common. Most of the sentences of the second summary have been taken over without any change from the first summary. However, some minor changes have been made here and there. Why are these necessary? In a point-form summary, as far as possible the points fall into a pattern and variations in the pattern are not attempted. However, in a paragraph-type summary, it is necessary to vary sentence structures a little, so that it does not become boring to read. The changes introduced above can be understood in this light.

So far we have been concerned with writing a summary of the passage as a whole. But in real life summary writing, we are not very often concerned with being faithful to a particular passage as such. We may instead go to a passage to look for a specific piece of information that we need. If the passage happens to provide the required information we may then consider noting it down in order to use it later. In such cases, we go to a particular passage for a specific purpose, our own purpose. Other people may go to the same passage for a different purpose. So the points that I draw from it may be very different from those that another person does. Let us approach the above passage from a particular point of view. You have been asked to gather information which can be used to show that the use of plastic is dangerous for our environment. What do you note down? Write down your points in the space given below :

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You will have realised that a summary of this kind does not require points from the whole passage, but only from the relevant parts. You may also want much greater detail about these parts. So the information will be both less than, and more than in the previous summary. Will it then be sufficient for us to note down all and only the unfavourable effects on the environment in greater detail, or will it be wise to take down the arguments for the use of plastic as well? The 'favourable' points may prove to be useful to us in anticipating objections from our opponents. Let us now note down these points.

Summary III : Particular Purpose

Plastic

A Against plastic :

- 1 (While it is true that the basic resin-manufacturing process of making plastic produces much less smoke and soot than is produced in the manufacture of steel,) nevertheless, many of the ingredients used are dangerous, e.g., benzene (used in the production of styrene, epoxy, polyester and nylon) is a carcinogen.
- 2 Common types of plastic produce toxic gases in fires (e.g., hydrogen cyanide, hydrogen chloride); (however, it is claimed that wood also produces toxic gases when burned.)
- 3 Carbon-reinforced plastics when burned release clouds of tiny fibres that can get into electrical equipment and cause short circuits.
- 4 Plastics are neither biodegradable nor can they be easily recycled. Thus they add to the earth's already enormous litter problem. Recycling plastic bottles does not have much economic incentive. (However, manufacturers are working to make recycling more practical).

For Plastic :

It is claimed by plastic manufacturers that :

- 1 Plastic requires much less energy to produce than other materials.
- 2 There is less smoke and soot in its manufacture.
- 3 Other materials like wood also create toxic gases when burned, and non-plastics may catch or start fires more readily.

Example 2

Now we're going to look at a passage which deals with the process by which we feel pain when we injure ourselves. When we are hurt, different kinds of messages are sent by the nerves to the brain and to the spinal cord, by means of which we begin to feel pain. Other activities also take place like the flow of blood from the injured spot. The increased flow of blood brings more white blood cells to the spot, which help to fight the infection and aid in the healing process. By understanding the way pain is communicated we can explain how certain kinds of painkillers work. Now read the passage.

A New Route to Comprehending Pain

- 1 Scientists thought for decades that pain was like a message sent over a telegraph line: nerve cells simply sent electrical impulses to the brain. But new research is uncovering a vastly more complicated picture, one involving dozens of biochemical and electrical processes that can operate both to heighten and to dull our perception of painful stimuli. While the complete procedure still is not fully understood, recent discoveries point to new ways the pain process might be interrupted or stopped.
- 2 The process starts at the point of injury. Suppose you burn your finger on the stove. The sudden heat stimulates two types of nerves — 'slow' ones and 'fast' ones. Both types respond by sending out electrical signals. It takes the fast impulse less than a sixth of a second to race the length of the nerve to the spinal cord. There the signal prompts a chemical called a neuro-transmitter to leap across a tiny gap to nearby

spinal cord nerve cells. These nerves carry the signal up to the brain stem and the higher brain, where you finally sense the pain. The 'fast' signal is felt for only seconds as a sharp localised pain. The 'slow' message, about a second behind this, is longer-lasting, not as localised and more disagreeable.

- 3 Back at your injured fingertip, other chemicals are making the situation worse. The burned tissue has released hormones called prostaglandins, which attract blood. That is good, because blood contains white blood cells and substances that fight infection and promote healing. But the prostaglandins also make the nerve fibres sensitive, meaning that even a smaller contact with the injured spot will fire them off. Pressing the burned area is going to hurt a lot more than pressing your other fingertips. At least two other classes of chemicals, bradykinins and leukotrienes, also flood the site of the injury. Like prostaglandins, they make the nerves more sensitive.
- 4 The pain pathway is not a one-way street. The brain and spinal cord have their way of easing the situation. Natural painkillers including one called enkephalin, are sent down the spinal cord. Enkephalin stalls the release of substance P, a neurotransmitter in the spinal cord. With substance P neutralised, the pain message is blocked.
- 5 This new understanding also explains how some painkillers work. Aspirin, it seems, blocks the production of prostaglandins, which keeps the swelling down and the nerves less exquisitely sensitive. Local anaesthetics interfere with the electrical signal. Opiates, such as morphine, de-activate specialised chemicals in the nerves of the spinal cord and brain that receive the message.

(from 'A New Route to Comprehending Pain' by Joanne Silberner, *Span*, January, 1988; reprinted from *U.S. News and World Report*).

Now we shall follow our usual system of isolating the main idea or ideas in each paragraph. Let us begin with Paragraph 1. Does this have one main idea or two? Write out these ideas below.

Paragraph 1

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What ideas have you put forward? The paragraph begins with the old idea of pain and then moves on to say that new research has now shown that pain is caused by many other things as well. The old idea is brought in as the background against which new research has been done. By doing this the writer suggests that he is now going to talk about the new research. Now that we have isolated these two points in Paragraph 1, fill in the details about these two ideas in the outline given below.

Paragraph 1 :

Old idea of pain :

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New idea :

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You should have produced something like the following :

Old idea of pain : that nerve cells sent electrical impulses to the brain.

New idea : that there are dozens of biochemical and electrical processes which colour our perception of painful stimuli.

Notice that the 'new idea' is restricted to only the causes of pain, not to new discoveries about ways of stopping pain. So only one part of the new research is brought in here. The other part is not required.

Now let us move on to paragraph 2. State the main idea of this paragraph below.

Let us discuss what should go into a summary of Paragraph 3. In order to make a general statement we shall not refer to the injured fingertip. Instead, we can say 'at the point of injury'. We then need to bring in 'the release of the hormones called prostaglandins which attract blood'. We are not concerned with 'the burned tissue' because we have generalized the context to injuries as such. We also don't need to mention that 'other chemicals are making the situation worse'. Next, the beneficial effect of the flow of blood has to be mentioned and also the harmful effect. Pressing the burned area which causes pain is merely a restatement of the idea already stated — the idea is now being applied to the example. So it can be omitted from the summary. The last two lines of the paragraph mention the names of other chemicals which are also released. Since these are some chemicals among others, we can perhaps make a general statement about them and that will be enough. So, the summary of Paragraph 3 can then read :

At the point of injury, hormones called prostaglandins are released.

Beneficial effect : Prostaglandins attract blood, which contains white blood cells and other substances that fight infection and promote healing.

Harmful effect : Prostaglandins make the nerves more sensitive and therefore increase the pain.

Other chemicals are also released which make the nerves sensitive.

Now let us turn to Paragraph 4. Part of this paragraph is quite technical and the details need not be included in a summary. Bring in only the main point without the details and without the repetition that the first two lines of the paragraph have. Write out the summary of Paragraph 4 here.

Paragraph 4 :

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In this paragraph, the writer is mainly talking about the role of the brain and the spinal cord in relieving pain. The manner in which they do this, however, need be mentioned only in very general terms. Thus we see that the first line can be omitted altogether and only part of the second line need be retained. Only a few key points from the next few lines are kept. The summary can thus read :

The brain and the spinal cord release natural painkillers, which are sent down the spinal cord to block the pain message.

All mention of enkephalin and substance P is removed because in the general kind of summary we are making this is not required. If you were actually making a study of the subject, these points would be very important. In a general passage of this kind, however, which is meant for the general reader, the summary can ignore these technical details.

Now turn to Paragraph 5, the last paragraph. What are the main points here? Notice that while this is almost as short as Paragraph 4, it does not deal with so many technical details. On the contrary, it talks about the effect of well-known painkillers known to most people. Hence, the individual effect of each type of painkiller is of interest, and mention of these can perhaps be retained. Since a lot of this information will thus be allowed to remain, this part of the summary is likely to be quite long. Try writing a summary of Paragraph 5 below.

Paragraph 5 :

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The first question that arises is : What do we do with the heading? We can no longer have headings as such, but we can, if we like, use the idea that occurs in the heading. In the present case, i.e. point 1, it would seem to be useful to keep it and use it as the first sentence instead of starting off directly with the old idea of pain. The second question that arises is : how do we change and modify the statement of the old and new ideas of pain in order to write a continuous paragraph? The following paragraph contains the ideas in the first point of the outline type summary :

New research on pain is taking place. This shows that the old idea of pain, namely, that it was caused by nerve cells which sent electrical impulses to the brain, is no longer adequate. New work on pain shows that there are dozens of biochemical and electrical processes which colour our perception of painful stimuli.

What is the difference between the two types of summary? The first sentence here writes up the heading in the sentence form. A connection then has to be made between this and 'the old idea of pain'. This is done by stating 'This shows that is no longer adequate'. The words quoted here are not in the outline at all but they are necessary to link the new research with the old. The next sentence has 'New work on pain' and not 'New idea'. Why is this? Notice that in an outline summary, the pattern is very deliberately repeated, so under 'old idea of pain' is written 'new idea', repeating exactly the same words. In continuous writing, this kind of repetition is not desirable, for it becomes boring to read. It is therefore necessary to change the phrasing a little.

Should point 2 of the outline summary be in the same paragraph or in another one? Since the first paragraph is quite long and the second point is even longer, and also because there is a clear-cut separation between the points, it is desirable to put the information in another paragraph. What about the heading? Should it be retained? How shall we write out the beneficial and harmful effects? Should the last sentence of point 2 in the outline be kept separate as it is or should it form part of something which comes before? The following paragraph attempts to write out point 2 of the outline in continuous prose :

When injury to any part of the body occurs, two types of nerves, 'slow' and 'fast', carry messages to the brain. The fast signal is felt as a sharp, localised pain; the slow signal as a longer-lasting, more general pain. At the point of injury, hormones called prostaglandins are released in addition to other chemicals. Prostaglandins have a beneficial as well as a harmful effect. They are beneficial because they attract blood which contains white blood cells and other substances that fight infection and promote healing. They are also harmful because they make the nerves more sensitive and therefore increase the pain.

Notice that we have added 'When injury to any part of the body occurs', because when we are writing up a continuous summary, we cannot avoid stating things in a slightly fuller manner than in an outline type summary. Also, all the statements that have been separately stated under point 2, are brought together into one running paragraph. The separation of the beneficial effect and the harmful effect in the outline summary had been done in order to make this appear clearly. Since this kind of a separation is not possible in a continuous summary, another line has been added, namely, 'Prostaglandins have a beneficial as well as a harmful effect'. After that line follows 'They are beneficial because....' and then 'They are also harmful because.....'. Notice that subheadings are being changed into statements. An 'also' has been added in 'They are also harmful...' in order to draw a connection between the two sentences beginning with 'They are beneficial.....' and 'They are harmful.....'. One more change that has to be noted is that the last line of point 2 has been included in an earlier related line, namely, 'At the point of injury, hormones called prostaglandins are released in addition to other chemicals'. Since this can very easily be included earlier, there is no need to make a separate statement. This could of course have been done in the outline type summary as well.

Now let us deal with points 3 and 4. Since the two are related and point 3 is very brief, the two will be placed in the same paragraph. Again we shall have to do something about the headings. We shall also have to be careful that a link has been maintained between this paragraph, that is paragraph 3, and the previous one. The summary can then read as :

18.2 LET US SUM UP

Through these exercises, you have had some practice in writing summaries, both outline type summaries and those written in continuous prose. Summary writing is a very important activity. In addition to its usefulness in practical life, it is also very good training for the mind. The separation of important from less important ideas and the ability to condense information help in developing your mental faculties. It is advisable to continue to practise summarizing along the lines of these lessons, on passages drawn from newspapers, text-books, or any other source. You need a great deal of practice in order to learn to summarize well. It is an art worth learning.

18.3 KEY WORDS

en'vironment : surroundings

'plastic (noun) : a substance that is easily shaped or moulded; a synthetic resinuous substance, moulded under pressure while heated, or drawn into filaments for use in textiles.

18.4 SUGGESTED READING

Weakly, fortnightly and monthly magazines of general interest.

APPENDIX

Example 1

Summary I : Outline type

Plastic

- 1 **History** : Plastic has been used by us for a long time as a major material.
- 2 **Manufacture** : Ingredients : Plastic is mainly made from petroleum and natural gas.
- 3 **Effects on environment** : favourable and unfavourable :
 - a) The favourable effects of the use of plastic are :
 - i) Plastic requires much less energy to produce than other materials.
 - ii) There is less smoke and soot in its manufacture.
 - iii) Other materials like wood also create toxic gases when burned, and non-plastics may catch or start fires more readily.
 - b) The unfavourable effects on the environment are :
 - i) The ingredients used in manufacturing plastic are dangerous.
 - ii) Common types of plastic produce toxic gases in fires.
 - iii) Carbon-reinforced plastics can cause short circuits when burned.
 - iv) Plastics are not biodegradable or recyclable. Thus they add to the earth's already enormous litter problem. (Attempts to make recycling easier are being made.)
- 4 **Future** : The use of plastic in the future is likely to increase greatly. In fact we may even make houses and bridges out of plastic.

Example 2

Outline type Summary of 'A New Route to Comprehending Pain'

1 New research on pain

Old idea of pain: that nerve cells sent electrical impulses to the brain.

New idea : that there are dozens of biochemical and electrical processes which colour our perception of painful stimuli.

2 Bodily processes in feeling pain from injury

When injury occurs, two types of nerves, 'slow' and 'fast' carry messages to the brain. The fast signal is felt as a sharp, localised pain; the slow signal as a longer-lasting, more general pain.

At the point of injury, hormones called prostaglandins are released.

Beneficial effect : Prostaglandins attract blood, which contains white blood cells and other substances that fight infection and promote healing.

Harmful effect : Prostaglandins make the nerves more sensitive and therefore increase the pain.

Other chemicals are also released, which make the nerves sensitive.

3 Action of natural painkillers

The brain and spinal cord release natural painkillers which are sent down the spinal cord to block the pain message.

4 Action of man-made painkillers

Greater understanding of the nature of pain explains how some painkillers work.

- e.g. i) Aspirin : blocks the production of prostaglandins. This keeps the swelling down and makes the nerves less exquisitely sensitive.
- ii) Local anaesthetics : interfere with the electrical signals of pain.
- iii) Opiates, such as morphine : deactivate special chemicals in the nerves of the spinal cord and brain that receive pain messages.

Summary II of 'A New Route to Comprehending Pain'

New research on pain is taking place. This shows that the old idea of pain, namely that it was caused by nerve cells which sent electrical impulses to the brain, is no longer adequate. New work on pain shows that there are dozens of biochemical and electrical processes which colour our perception of painful stimuli.

When injury to any part of the body occurs, two types of nerves, 'slow' and 'fast', carry messages to the brain. The fast signal is felt as a sharp, localised pain; the slow signal as a longer-lasting, more general pain. At the point of injury, hormones called prostaglandins have a beneficial as well as a harmful effect. They are beneficial because they attract blood, which contains white blood cells and other substances that fight infection and promote healing. They are also harmful because they make the nerves more sensitive and therefore increase the pain.

In order to cope with the pain, the brain and spinal cord release natural painkillers which are sent down the spinal cord to block the pain message, i.e. to prevent the pain from being felt. Greater understanding of the nature of pain explains how some of the man-made painkillers work. For example, Aspirin blocks the production of prostaglandins (this keeps the swelling down and makes the nerves less exquisitely sensitive); local anaesthetics interfere with the electrical signals of pain; opiates, such as morphine, deactivate special chemicals in the nerves of the spinal cord and brain that receive the pain messages.