**2018/19**

**Note-taking**

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 **preparation for higher education**

 **academic skills**

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**1. What kind of learner are you?**

Take the VAK learning styles self-assessment questionnaire (SQA: Online, Accessed 9 July 2018)[[1]](#footnote-1) to find out.

………………………………………………………………………………………………………………………..**Circle the answer that most represents how you generally behave.**

1. When I operate new equipment I generally:
	1. read the instructions first
	2. listen to an explanation from someone who has used it before
	3. go ahead and have a go, I can figure it out as I use it
2. When I need directions for traveling I usually:
	1. look at a map
	2. ask for spoken directions
	3. follow my nose and maybe use a compass
3. When I cook a new dish, I like to:
	1. follow a written recipe
	2. call a friend for an explanation
	3. follow my instincts, testing as I cook
4. If I am teaching someone something new, I tend to:
	1. write instructions down for them
	2. give a verbal explanation
	3. demonstrate first and then let them have a go
5. I tend to say:
	1. watch how I do it
	2. listen to me explain
	3. you have a go
6. During my free time I most enjoy:
	1. going to museums and galleries
	2. listening to music and talking to my friends
	3. playing sport or doing DIY
7. When I go shopping for clothes, I tend to:
	1. imagine what they would look like on
	2. discuss them with the shop staff
	3. try them on and test them out
8. When I am choosing a holiday I usually:
	1. read lots of brochures
	2. listen to recommendations from friends
	3. imagine what it would be like to be there
9. If I was buying a new car, I would:
	1. read reviews in newspapers and magazines
	2. discuss what I need with my friends
	3. test-drive lots of different types
10. When I am learning a new skill, I am most comfortable:
	1. watching what the teacher is doing
	2. talking through with the teacher exactly what I am supposed to do
	3. give it a try myself and work it out as I go
11. If I am choosing food off a menu, I tend to:
	1. imagine what the food will look like
	2. talk through the options in my head or with my partner
	3. imagine what the food will taste like
12. When I listen to a band, I can’t help:
	1. watching the band members and other people in the audience
	2. listening to the lyrics and the beats
	3. moving in time with the music
13. When I concentrate, I most often:
	1. focus on the words or pictures in front of me
	2. discuss the problem and the possible solutions in my head
	3. move around a lot, fiddle with pens and pencils and touch things
14. I choose household furnishing because I like:
	1. their colours and how they look
	2. the descriptions the sales-people give me
	3. the textures and what it feels like to touch them
15. My first memory is of:
	1. looking at something
	2. being spoken to
	3. doing something
16. When I am anxious, I:
	1. visualise the worst-case scenarios
	2. talk over in my head what worries me most
	3. can’t sit still, fiddle and move around constantly
17. I feel especially connected to other people because of:
	1. how they look
	2. what they say to me
	3. how they make me feel
18. When I have to revise for an exam, I generally:
	1. write lots of revision notes and diagrams
	2. talk over my notes, alone or with other people
	3. imagine making the movement or creating the formula
19. If I am explaining to someone I tend to:
	1. show them what I mean
	2. explain to them in different ways until they understand
	3. encourage them to try and talk them through my ideas as they do it
20. I really love:
	1. watching films, photography, looking at art or people watching
	2. listening to music, the radio or talking to friends
	3. taking part in sporting activities, eating fine foods and wines and dancing
21. Most of my free time is spent:
	1. watching television
	2. talking to friends
	3. doing a physical activity or making things
22. When I first contact a new person, I usually:
	1. arrange a face to face meeting
	2. talk to them on the telephone
	3. try to get together while doing something else, such as an activity or a meal
23. I first notice how people:
	1. look and dress
	2. sound and speak
	3. stand and move
24. If I am angry, I tend to:
	1. keep replaying in my mind what it is that has upset me
	2. raise my voice and tell people how I feel
	3. stamp about, slam doors and physically demonstrate my anger
25. I find it easiest to remember:
	1. faces
	2. names
	3. things I have done
26. I think you can tell if someone is lying if:
	1. they avoid looking at you
	2. their voice changes
	3. they give me funny vibes
27. When I meet an old friend:
	1. I say “It’s great to see you!”
	2. I say “It’s great to hear from you!”
	3. I give them a hug or a handshake
28. I remember things best by:
	1. writing notes or keeping printed details
	2. saying them aloud or repeating words and key points in my head
	3. doing or practising the activity or imagining it being done
29. If I have to complain about faulty goods, I am most comfortable:
	1. writing a letter
	2. complaining over the phone
	3. taking them back to the store or posting them back to head office
30. I tend to say:
	1. I see what you mean
	2. I hear what you are saying
	3. I know how you feel

………………………………………………………………………………………………………………………..Now add up how many As, Bs and Cs you selected.

As =

Bs =

Cs =

If you chose mostly As you have a **VISUAL** learning style

If you chose mostly Bs you have an **AUDITORY** learning style

If you chose mostly Cs you have a **KINAESTHETIC** learning style

Some people find that their learning style may be a blend of two or three styles, in this case read about the styles that apply to you in the explanation.

The VAK learning styles model suggests that most people can be divided into one of three preferred styles of learning. These three styles are as follows, (there is no right or wrong learning style)

* Someone with a **visual** learning style has a preference for seen or observed things, including pictures, diagrams, demonstrations, displays, handouts, films, flipchart, etc. These people will use phrases such as “show me”, “let’s have a look at that” and will be best able to perform a new task after reading the instructions or watching someone else do it first. These are the people who will work from lists and written directions and instructions.
* Someone with an **auditory** learning style has a preference for the transfer of information through listening: to the spoken word of self or others, of sounds and noises. These people will use phrases such as “tell me”, “let’s talk it over” and will be best able to perform a new task after listening to instructions from an expert. These are the people who are happy being given spoken instructions over the phone, and can remember all the words to songs they hear!
* Someone with a **kinaesthetic** learning style has a preference for physical experience – touching, feeling, holding, doing, practical hands-on experiences. These people will use phrases such as “Let me try”, “how do you feel?” and will be best able to perform a new task by going ahead and trying it out, learning as they go. These are the people who like to experiment, hands-on, and never look at the instructions first!

People commonly have a main preferred learning style, but this will be part of a blend of all three. Some people have a very strong preference; other people have a more even mixture of two, or less commonly, three styles. When you know your preferred learning style(s) you understand the type of learning that works best for you. There is no right or wrong learning style. The point is that there are types of learning that are right for your own preferred learning style (SQA: Online, Accessed 9 July 2018).

**2. Note-taking**

First and foremost, notes are a valuable resource. Their purpose is to help you remember key information relating to the subject you are studying. Good notes can help you get good grades. Without some note-taking strategies, it will be almost impossible for you to retain all the information you take in, especially during lectures.

Note-taking is an active learning skill; it develops your understanding of the subject you are studying; it reduces large quantities of information into more manageable sizes; and it helps you prepare for assignments and exams.

There are many note-taking methods, including:

* **Linear notes** (trying to write down as much of what is said or written as possible).
* **Keyword notes** (taking down the most important words said or written and adding a very brief comment, explanation or description).
* **Concept map notes** (linking concepts cited in a lecture or text in map form rather than a list).
* **Two column notes** (taking notes in one column and filling in the other with comments, questions and headings afterwards).
* **Cornell notes** (three sections, taking notes in right column, adding questions and cues in left and summaries in bottom – revise by covering right and answering left).

For more detailed explanations of these note-taking methods, use the links provided in the **Useful links** section of this unit.

The following sections focus on note-taking in practice, when reading, listening and attending lectures.

**3. Reading**

Being a successful student in higher education requires you to read regularly, thoroughly and efficiently. Taking notes as you read is essential in order to put the reading you do to effective use in your assignments and exams. Developing note-taking skills for reading will ensure you make the most of your time in the library.

**EXERCISE 1**

Read the passage below. Do not write anything and **read it only once**.

………………………………………………………………………………………………………………………..**China**

As it has emerged on to the world stage there has been increasing interest in China and the Chinese. At the same time, China has become more accessible for visitors from abroad and is now a popular destination for European tourists and business people.

China is a country of approximately 1.4 billion people, which is about 19% of the total population of the world. The population density is approximately 390 people per square mile.

China is regarded as one of the oldest of all civilizations. It is believed that the Chinese invented paper-making, the compass, gunpowder and printing. Among its most important ancient projects are the Great Wall of China, the Grand Canal and the Karez irrigation system.

The ruling party of China is the Communist Party and the current President is Xi Jinping, who succeeded Hu Jintao in 2013.

The official language of China is Mandarin, which has two standardised forms: Putonghua in the mainland and Guoyu in Taiwan. China has had a written language for over 6000 years.

China is a multinational state containing 56 officially recognised nationalities (or ethnic minorities). 90% of the population is Han and the rest is made up of the 55 minorities, including Mongols, Tibetans, Uyghurs, Tatars, Russians and Kazaks.

China’s currency is the Renminbi, which is more popularly known as the Yuan. £1 is currently worth around 8.80 Yuan.

The Chinese celebrated New Year 2018 on 16 February; 2019 will be the Year of the Pig.

………………………………………………………………………………………………………………………..Now, without looking back at the text, write down everything you can remember about it. Do it as quickly as you can. You can write in note form and the order is not important; it is the facts you want to remember.

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Now look back at the original text and compare what you have remembered.

How did you do?

If you managed to remember ten points or more, you have done exceptionally well. More likely, you will have remembered less than ten points, showing how important it is for most students in higher education to make notes as they go along.

**EXERCISE 2**

Read the original text about China again. This time, pick out five important points.

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| --- |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

Notice that you were asked to pick out the important points. One of the skills of learning to study effectively is learning to separate the important from the unimportant. The passage contains a lot of information and what you select depends on the question you are asked. For example, if you were asked to provide information for travellers to China which four points would you pick out?

|  |
| --- |
| 1 |
| 2 |
| 3 |
| 4 |

And if you were asked about Chinese national identity, which four points would you pick out?

|  |
| --- |
| 1 |
| 2 |
| 3 |
| 4 |

In each case, why did you select the information you selected? How did you decide what was important and what was unimportant?

**4. Listening**

As a student in higher education you will spend a significant amount of time listening, especially at university. Lectures are a core component of all degree courses in science and engineering, as are seminars, workshops, small group tutorials, presentations, group and pair work, all of which require note-taking to remember the most important information. You may only hear this information once, so you need to have the skills to take good notes quickly.

**EXERCISE 3**

This exercise should be done **in pairs**.

In the appendices you will find the text of a debate entitled “Is animal testing necessary for medical research?”. One of you should select the “Yes” side of the argument and the other the “No” side. Read the texts to each other in order (i.e. Yes Part 1, No Part 1, Yes Part 2, No Part 2 etc.) and take notes at the same time.

**Notes**

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Look at your notes and compare them with the original text.

There are three points you should be looking for:

* Where you picked up correct information.
* Where you picked up important information.
* Where you misheard something.

You can, if you wish, award yourself points for this exercise:

Add 1 point where you picked up correct information.

Add 2 points where you picked up important information.

Deduct 1 point where you misheard something.

Then add up your score. Of course there is nothing scientific about this, but it illustrates the importance of developing the skill of listening. For example, if you look back at the information on China, how much easier would it have been to remember if you had done some preparatory reading? This is even truer for listening, as you normally only get once chance to take notes and get them right.

**5. Taking notes in lectures**

Lectures are where students in higher education do most of their listening. Students are not normally encouraged to speak during lectures, instead they are expected to listen to an expert in their field discuss the subject being studied in-depth. A typical lecture lasts around 50 minutes and although many are now available online, you should be prepared to take note of the most important information you hear as you hear it.

Think about your lectures before you go into them.

**Are you prepared?**

If you are asked to do any reading or another task beforehand, do it. Tasks such as these are set because they will help you get the most out of the lecture and that, in turn, will strengthen your performance in assignments and exams.

**Do you know what you want to get out of this lecture?**

Think beforehand how this lecture will fit into your subject and the assignments and exams you have to do. Doing some pre-reading, as suggested above, will help you here.

**Are you ready to take notes?**

Have a note-taking method in mind before you go into the lecture and be prepared to use the same one throughout. You may decide to change methods in subsequent lectures, which is fine, but consistency will improve your note-taking skills and the quality of your notes. Before each lecture, look over the notes you took in the previous one.

**During the lecture**

Listen for key words and phrases that highlight important information (e.g. “The crucial moment came when …”). Develop your own easily understandable shorthand (e.g. KP = key point). Importantly, **make sure you actually listen** and don’t just write – a lecture is not a dictation exercise. Don’t spend time thinking about something you haven’t understood, put a question mark beside it and ask the lecturer, speak to another student or do some further reading.

**After the lecture**

Although it takes time, you may find it useful to re-write your lecture notes afterwards. If you have used a lot of shorthand you can fill it out again to make sure you understand it. Find out the answers to any queries you had. If you do that immediately, it will take no time at all; if you procrastinate, you will have a much harder job to do.

**Review your notes**

Once you have completed a series of lectures, spend some time looking over them all and write a summary of what you have covered up to that point. Your lectures are connected, which should be obvious in your notes.

**6. Practice**

**Reading**

Choose an article from the International Scientific Journal and use a different note-taking method with each one, then write a short summary (abstract) using your notes: <https://www.journalofnursingstudies.com/>

**Listening**

Choose a selection of TED talks and use a different note-taking method with each one, then write a short summary (abstract) using your notes: <https://www.ted.com/talks>

Compare your summary (abstract) to the original one? Did you miss out any important information? Did you include any less important information? Which methods have worked best for you?

**7. Useful links**

University of Edinburgh: <https://www.ed.ac.uk/files/imports/fileManager/IAD%20notemaking%20styles%20for%20lectures.pdf>

Mantex Information Design: <http://www.mantex.co.uk/how-to-take-notes/>

Open University: <http://www.open.ac.uk/choose/unison/develop/my-skills/effective-note-taking>

Open Learn: <http://www.open.edu/openlearn/>

Jobs.ac.uk: <https://www.jobs.ac.uk/careers-advice/managing-your-career/1006/top-ten-tips-on-note-taking#1>

Dundee and Angus College: <https://dundeeandangus.ac.uk/dmsdocument/434>

University of New South Wales: <https://student.unsw.edu.au/note-taking-skills>

University of Leicester: <https://www2.le.ac.uk/offices/ld/resources/study/notes>

**8. Appendices**

**1. Text for EXERCISE 3.**

Title: Is animal testing necessary for medical research?

………………………………………………………………………………………………………………………..

Yes

(Part 1):

Medical research is a difficult thing. The human body is the most complex machine we know. It has trillions of cells, each cell has billions of molecules, many of the molecules have tens of thousands of atoms. These machines made of molecules do their jobs perfectly. They work together in an amazing way. On one level molecules communicate with each other over very small distances and on a much larger level organ like the heart and the liver communicate with each other, too. Medical researchers need ways of copying these levels of communication. In the past century so many ways of investigating the body have been discovered – growing cells, taking photographs of the inside the body without harming it, and computer models. These are all powerful methods to help fight disease but none of them can copy the way the body really works.

 Without the use of animals in their research, it would be really difficult for scientists to develop new treatments, and to do research to increase our knowledge. For example, it was Alan Lloyd Hodgkin and Andrew Huxley’s work on the nerves of squid that explained the way nerves communicate. And it was John C Eccles’ work on cats that first showed the way information travels in the brain across its synapses. With this research John C Eccles earned a share of the 1963 Nobel Prize in Physiology, with Hodgkin and Huxley. Without their work on animals, we would know a lot less about the way our bodies work and how to treat them.

Yes (Part 2):

It’s very true that there are big differences between animals and humans. But part of research is thinking about these differences and choosing the best models to copy the system we are testing. Fortunately, scientists have found many ways of making the differences smaller between animals and humans, such as the use of transgenic animals – animals changed genetically to be more similar to humans. This has other benefits, including a shorter time between generations of the same animal. In this way scientists can do experiments not possible using humans (even if we forget the problems of what is right and wrong).

 I’d love to hear ideas for ways to replace these animal models that stop the risks coming from the differences between animals and humans. But at the moment there are none. And developing these methods is still just a dream. To think we can find other methods gives the wrong idea. We can say that we can make medical discoveries without using animals. But if we cannot suggest other methods, this is a waste of time.

 The thalidomide problems came from not enough animal testing. At the time it was not usual to give pregnant animals drugs before medical use. After scientists knew about the effects of thalidomide, experiments using pregnant animals confirmed the results. Then tests using pregnant animals became usual.

Yes (Part 3):

It is crazy to say that microchips and small doses can study the effects of drugs on a living system. How can a chip copy a human heart? Small doses can be useful for studying how a drug is accepted by a system but gives very little information on how well it can treat an illness. Other methods are already used in research, but we can’t expect them to replace animal tests in the near future. It’s true that thalidomide doesn’t affect all kinds of animals. This is why drugs are tested on a variety of carefully chosen kinds of animals. These models will never be perfect but, as any scientist will tell you, no test is perfect. We must use the best model we have, and sometimes this means using animals.

 But you are forgetting the most important use of animals in science – basic research. Without animals, we would know far less about the way the heart works, how digestion works, how hormones work, and a lot of other information which none of your ‘other methods’ can hope to find. So if we value progress in medical science, animal research is necessary.

……………………………………………………………………………………………………………………….No

(Part 1):

Absolutely! The human body – indeed most living systems – is extremely complex. This is why animals are not good models for human medicine.

 Humans are different from other animals in many ways. This means information from animals cannot be used for humans very well.

 It is easy to understand that when a drug or medical treatment is developed, it must be tested in a living system. Using animals is using the wrong system. The differences between animals and humans are very great so for a complete biological system those differences become even greater. We need to do testing in a way that stops the risks coming from these differences. Instead testing must be directly useful to humans.

 We must balance medical progress against the delays and big mistakes which come from animal experiments. The thalidomide disaster is one of the most famous. Tens of thousands of children were born with very bad physical problems, for example, having no arms or legs. These problems were not predicted in animal tests. And there are many other examples. It is true that some discoveries are the result of animal experiments but it does not mean that the discoveries could not have been made in other ways. Dr John McArdle said that historically, vivisection – operating on live animals - has been like a slot machine in a casino. If researchers pull the lever enough times, some good things will come by luck. This kind of thinking is not good science. Good science - useful and efficient science - is what we must look for.

No (Part 2):

Even when changed genetically, there is no single animal model that can really copy the complex human body. There are far too many unknown differences that cannot all be thought of. Instead, we now have scientific (not story book) methods such as using microchips and using very small doses. These methods study the effects of drugs on a complete living system. They study a human living system. This stops mistakes that come from the differences between animals and humans resulting in information that is not useful for humans.

 Studies have shown that other methods can predict effects found in humans better than information from animals.

 Later results from testing thalidomide on pregnant animals only resulted in defects when given to white New Zealand rabbits at doses between 25 to 300 times that given to humans. And to certain kinds of monkeys at ten times the dose. Even if the drug had been tested on those kinds of animals by luck, thalidomide would still have been sold. This is because most animals showed no negative effects. When they did show effects, it was after much higher doses than given to humans.

No (Part 3):

Certainly we can say that no model is perfect. But using humans for testing is far more useful than information from using animals. Even the US Federal Drug Administration says that nine out of ten drugs ‘proven’ successful in animal tests fail in human tests. This questions the argument for using animals, and asks about all the drugs that failed in animals which might have worked in humans. How many cures for cancer were missed?

 In the past, much research has been based on animals because we didn’t know any better. Today we understand far more about the dangers of using information about animals to treat humans. And we have scientific research methods including mass spectrometry, genetic maps, new ways of using photography and advanced computer models which can copy parts of the human body.

 Very ill patients don’t care whether a cancer drug works on a mouse, or that some disease can be cured in another animal. That only gives them false hopes. These people need real cures using real science – not old fashioned animal experiments which give false hopes.

………………………………………………………………………………………………………………………..

*Is animal testing necessary for medical research?* Adapted from: New Internationalist Easier English Wiki. [Accessed 11 July 2018]. Available from: <https://eewiki.newint.org/index.php?title=Is_animal_testing_necessary_for_medical_research%3F>

1. <http://www.sqa.org.uk/files_ccc/VAK.doc> [↑](#footnote-ref-1)