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Skills for Computing

*Topic 3:
Academic Writing*

Learning Outcomes for this Topic

By the end of this topic, students should be able to:

- Recognise and use an appropriate academic style in writing, with a clear plan and structure
- Reference sources correctly; write citations and bibliography
- Identify the requirements of a task or question

Analysing the Question - 1

How do we analyse the question?

- Break it down into its constituent parts

What are the parts of a question?

- The task
- The scope or boundaries which limit the task

Analysing the Question - 2

- In order to identify the constituent parts of the question, we can select **key words**.
- To determine the key words, ask yourself the following questions:
 - What are we being asked to do?
 - What is the scope of the task?
- The key words should define the **task** and **scope**.

Example

- Look at this question:

Compare and contrast the .mp3 and .wav file formats for storing audio on a computer.

- What are the key words?

Example Solution – Stage 1

- What are we being asked to do?
- **Compare** and **contrast** are the key words. Broad definitions of these terms would be as follows:
 - Compare: look at the characteristics of both items specified 'side-by-side';
 - Contrast: look specifically at the differences between the two.

Example Solution – Stage 2

- What is the scope of the task?
- The limits on **scope** are:
 - .mp3 and .wav .
 - Specific file types, therefore we don't need to consider any others
 - Storing
 - Not transmitting, for example.
 - Audio
 - Not video or any other media format.

Exercise 1

Highlight the key words in each of these questions:

1. Explain the difference between Computer Science and Information Technology.
2. Evaluate the impact of wireless communications on the business environment of the last decade.
3. Compare and contrast the web authoring applications Adobe Dreamweaver and Mozilla SeaMonkey.
4. Discuss the advantages and disadvantages of web authoring applications such as Adobe Dreamweaver or Mozilla SeaMonkey.

Exercise 1 - Solutions

1. Explain the difference between Computer Science and Information Technology
 - Focus on defining the two terms, and looking at where they are different.
2. Evaluate the impact of wireless communications on the business environment of the last decade
 - Evaluating impact is a hard question; requires value judgements on how important something has been
 - Specific to wireless communication technologies, and specific to business rather than personal use
 - Time-limited to the last ten years

Exercise 1 - Solutions continued

3. Compare and contrast the web authoring applications Adobe Dreamweaver and Mozilla SeaMonkey
 - This question is asking us to write a comparison of two specific products.

Exercise 1 - Solutions continued

4. Discuss the advantages and disadvantages of web authoring applications such as Adobe Dreamweaver or Mozilla SeaMonkey
 - This question is asking us to weight the advantages and disadvantages of web authoring applications as a generic type of computer program.
 - The introduction needs to define our own context (e.g. advantages/disadvantages to the website designer) since this is not specified in the question.
 - Dreamweaver and SeaMonkey are given as examples – the answer should definitely not be limited to these two programs.

Other Common Key Words - 1

- Describe
 - Identify what can be seen or what happens in time
- Analyse
 - Take idea, concept, entity apart and look at how parts relate
- Evaluate
 - Like compare and contrast but explicitly requires a justified judgement, i.e.. which is the best
- Explain
 - Like describe, but with supporting reasoning

Other Common Key Words - 2

- Define
 - Generally related to established knowledge, give in your own words
- List
 - Straightforward, short phrases
- Reflect
 - Your personal point of view, generally on some task you have undertaken
- Discuss
 - Can be hard to determine what is required, could be describe, analyse or explain

Essay Planning - 1

- The next stage is to develop an **essay plan**.
- This should include:
 - exactly what points you will make
 - in what order you will write it

Essay Planning - 2

- To continue the example from earlier, a plan for the question on audio file storage would begin with your analysis of what we're being asked to do:
 - Describe Audio and Select Criteria
 - Compare
 - Contrast

Essay Planning - 3

- The next phase is to add our **introduction** and **conclusion**; every essay must have these!
 - Introduction
 - Describe Audio and Select Criteria
 - Compare
 - Contrast
 - Conclusion

Writing an Introduction

- The introduction should summarise what your answer is going to say - briefly!
- Include the following:
 - How have you understood the question?
 - Re-state the task and scope in your own words

Writing a Conclusion

- Summarise the key points of your answer
- Summarise them in the order in which you wrote them
 - i.e. the conclusion should mirror the plan
- Answer the question
 - Explain how the points you have made address the task which the question asked you to complete
- Make a value judgement
 - If you are asked to compare two items in a certain context, for example, then you should state which is more appropriate or useful in that context.

Exercise 2

- Take this basic model for an answer, and add some notes on what you might write in each section. Just one or two lines for each will be enough at this stage.
 - Introduction
 - Describe Audio and Select Criteria
 - Compare
 - Contrast
 - Conclusion

Essay Plan: Model Answer

- Introduction
 - *What is this answer going to say? Explain your task and scope which you have extracted from the question*
- Describe Audio and Select Criteria
 - *What are the key characteristics which relate to this question?*
 - *What are the characteristics of an .mp3 file?*
 - *What are the characteristics of a .wav file?*
- Compare
 - *Which characteristics are the same for both?*
- Contrast
 - *Which characteristics are different?*
- Conclusion
 - *What are the key points we have made?*
 - *Value judgement: which file type is "better" according to your criteria and analysis?*

Writing Style - 1

Tone/Register

- Academic writing style is normally quite formal.
- Sounding 'chatty' and using slang or colloquial language is never appropriate
- Looking at Academic Journal articles can be useful to capture a 'tone of voice' or 'register' which is appropriate.

Writing Style - 2

When writing academic work...

- Do:
 - Write fairly short, clear sentences
 - Focus on facts and analysis, rather than opinions
 - Use paragraphs, and keep their lengths roughly consistent
 - Spell-check, and then proof-read.
 - Use citations throughout and a bibliography at the end, as discussed later in this lecture.

Writing Style - 3

When writing academic work...

- Don't:
 - Use slang and colloquialisms
 - Use a 'journalistic' style of writing; if it sounds like an exciting and dramatic news report, you've got it wrong!
 - Write very long sentences where several shorter ones would do
 - Assume that you know who the reader is, or that they know you. Imagine you are writing for a stranger.

Drafting

First (rough) drafts:

- This refers to your first attempt at a piece of writing.
- You may find it useful to firstly write quickly to get your ideas down, without worrying about style or good English
- Use your plan/structure to create headings and sub-headings (you may want to delete these later).
- Write paragraphs and sections in whatever order you find easiest. You could choose to leave the introduction/conclusion until later.

Evaluating and Improving Your Draft(s)

- Focus your efforts on two key areas:
 - **Structure:** check that information is grouped and ordered logically, and that the argument is clear and flows.
 - **Style:** check that your writing makes sense, that spelling, punctuation and grammar are correct, and that sentences are a good length – try reading aloud to help with these.
- If you can, ask a tutor for feedback.

Finishing Touches

- At the end, always check that:
 - Your work answers the question fully
 - The main line of your argument is clear
 - The tone is suitable for the intended audience
 - Your writing flows and is easy to read
 - Your sources and reference list are complete (we will discuss these shortly)
 - There are no spelling, grammar and punctuation errors

Exercise 3 – Fast Writing Part 1

- Write a very quick rough draft, based on the following question and plan:
 - ***What are the advantages and disadvantages of studying IT at diploma level?***
 - ***Plan:*** *Advantages:* these include better career prospects, going on to further study, personal development through learning
Disadvantages: time, money and hard work!
- You have **5 minutes** to complete this task
 - don't worry if you do not reach the end of the plan

Exercise 3 – Fast Writing Part 2

- Keep your rough draft safely for now. Before the tutorial session for this topic, make an improved draft of your text.
- Remember to focus on structure and style. Use appropriate parts of the ‘Finishing Touches’ checklist for further editing and improvement.
- Remember to bring your rough (fast) draft – unaltered – and your improved draft to the tutorial.

Researching Your Answer

- **Research** means gathering information which will help you answer a question.
- The act of researching means locating information, recording it, and applying it to a question.

Sources - 1

- A source is where your information comes from.
- Can be divided into Primary and Secondary sources:
 - **Primary sources** = data you collect yourself. These will be dealt with later in this module in the ‘Data Handling’ topics
 - **Secondary source** = something written by someone else

Sources - 2

- We must record the source of any idea which is not our own original work.
- We do this with a ***citation***.
 - Standards for citing sources will be discussed in the Seminar class which accompanies this topic.
- Citations must always make reference to your ***Reference List...***

Reference List - 1

- A **Reference List** is a list of all the sources used in a paper, essay or assignment.
- The standards for presenting a reference list in the **Harvard Style** (used throughout NCC Education programmes) will be covered in more detail in the seminar for this topic.

Reference List - 2

- Every entry in a Reference List must include the following information:
 - Author's Surname - plus forename and/or initial(s)
 - Year of Publication
 - Title of Sources
 - Place of Publication
 - Name of Publisher
- Reference lists should always be ordered alphabetically by author's surname.

Bibliographies

- A ***bibliography*** is an expanded reference list.
- It includes additional sources on the same or related subjects as the essay or article - but which are **not** directly cited in it.
- Generally, in assignments on this programme, you should use Reference Lists: in other words, do not include sources which are not cited in your writing.

Summary: How to write an essay-style answer

- Analyse the Question; Ask yourself:
 - What am I being asked to do?
 - What is the scope of the task?
- Plan your answer
- Research your answer
- Write your answer (draft and redraft)
- Reference your answer and compile your reference list

References and Further Reading

NB: This is an example of a Reference List!

- Race, P. (2003). *How to Study*. Oxford, Blackwell Publishing
 - See especially Part III, pp73-98
- Race, P. (2008). *How to Get a Good Degree*. Milton Keynes, McGraw-Hill / Open University.
 - See especially Chapter 6, pp175-193

Topic 3

Any Questions?



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