

# 4COC0S003W Trends in Computer Science

Computer Science and Engineering

Digital Literacy

Lecture Week 3

Additional notes

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# Aim of this week's lecture

- To be able to undertake research on a topic.
- To be able to make a choice of tools which can allow for reliable and credible sources to be identified.
- To be able to distinguish among sources.
- To be able to use a referencing system such as Westminister Harvard with confidence.
- To discuss the importance of avoiding plagiarism.

# Pre-lecture material

- I hope you had a chance to follow the pre-lecture material.

# A project's life cycle

- Literature review/ Background Research
- Methodology
- Requirements' gathering/ Design
- Implementation
- Testing
- Critical review/ further developments

# Why referencing

- A referencing section represents a list of sources used as part of research, presented to a reader using a Referencing System.
- By helping our reader to identify our sources and see how they allowed us to present arguments and to reach a conclusion, we allow them effectively to follow our steps to reproduce our research, if they so wish. This is fundamental in science where sets of steps need to be able to be repeated..
- Referencing Systems might be organised **alphabetically** or **numerically**.
- Harvard, or Westminster Harvard, is an example of an alphabetically organised referencing system.

# An example of Westminster Harvard

- Schneider, G.M. and Gersting, J.L. (2017), Invitation to Computer Science, 8<sup>th</sup> edition. Boston: Cengage

In our References section, sources will be listed alphabetically based on the initial letter of the author's surname, whilst as part of the text (slide, report) we will include the author's surname and date only.

We call this intext citation.

# An example of a numerical referencing system

[1] Schneider, G.M. and Gersting, J.L. (2017), Invitation to Computer Science, 8<sup>th</sup> edition. Boston: Cengage

In our References section, sources will be listed numerically, based on their order of appearance in our text (slide, report). In our text we will include only a number within square brackets representing a source, starting with [1], followed by [2] for the next source etc.

# Undertaking research

- Use of appropriate tools such as *library search* or *Google Scholar* to identify sources which are credible i.e. they have been *peer reviewed*.
- Use of appropriate keywords to identify sources
- Differentiate between
  - primary sources (such as Journal papers), where authors present their own work;
  - secondary sources (such as books), where authors summarise others' work;
  - tertiary sources (such as reference guides/dictionaries), where definitions are provided.



# Presenting content from our sources

- The aim of our research is to identify relevant sources and show how they relate to our work.
- We need to *paraphrase* content where we can, i.e. express it in our own words.
- Often, only part of a book or a paper will be relevant for our work- we need to state that in our references' list.
- For further information, consider the lecture and the library referencing guide and referencing website.

# Plagiarism and why it is important to avoid it

- It is important to avoid plagiarism, not only because it is a form of misconduct, but also because it is important, as scientists, to respect each other's work and state the author of an idea even when we express it in our own words.
- It is not enough to provide a list of references at the end of a piece of work!

# Plagiarism and why it is important to avoid it

- The references section should provide all sources referenced in your work.
- In-text references evidence which source has been used where.
- A bibliography with no in-text references might demonstrate which sources you read/considered, but it does not show whether such sources were used.
- Consider the Library guide for the University of Westminster, Harvard Style referencing- you can find the link under Library Search, as well as in your pre-lecture materials and in your Coursework 1 specification.

- Thank you!