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Computer Science Dissertation writing

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Attendance

- <https://forms.gle/gYtd6cHthgCre56M7>



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Dissertation Structure (answer)

1.Title Page

2.Declaration

3.Abstract

4.Covid-19 Impact Statement

5.Acknowledgements

6.Contents

7.Introduction

8.Literature Review

9.Requirements + Analysis

10.Design

11.Implementation + Testing

12.Results +Discussion

13.Conclusion

14.References

15.Appendices



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Lesson objectives

Consider writing the literature review: working with sources and plagiarism.

Become familiar with the requirement analysis section.



Methods Section

Task 1

1. My Methods section should provide information that helps readers understand how and why my experiments or research was done.
2. I should include information that would allow other researchers to reproduce my study and obtain largely similar results.
3. I should describe methods that are standard in my field.
4. My Methods section should make it easy for readers to understand and interpret my results.
5. I should write my Methods section in a manner that allows readers to conclude that my results are valid.
6. My methods section should constitute a substantial portion of my paper.
7. I should provide justifications for my choice of methods.
8. I should discuss the limitations of my method in the Methods section.
9. In my field, Methods sections typically include references to other studies.



Methods Section - answers

Task 1

- ✓ 1. My Methods section should provide information that helps readers understand how and why my experiments or research was done.
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- ✓ 5. I should write my Methods section in a manner that allows readers to conclude that my results are valid.
- ✓ 6. My methods section should constitute a substantial portion of my paper.
- ✓ 7. I should provide justifications for my choice of methods.
- ✓ 8. I should discuss the limitations of my method in the Methods section.
9. In my field, Methods sections typically include references to other studies.



Requirement Analysis

1. You should state, in a more detailed way, the objectives of the project by requirement.
2. The analysis should break the problem down into manageable steps.
3. There may be more than one suitable approach.
4. The analysis may cover more of the area than is finally implemented.
5. Testing and evaluation should be given due consideration.
6. It is important that you state how you will evaluate your work.
7. For a design project it is appropriate to consider testing at the same time as specification.



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Look at the extract from the requirement analysis section of a dissertation.

‘Using virtual assistants for language learning: a case study for Alexa.’

Does the requirement and analysis section mention the aims and objectives?

Does it break the problem down into manageable steps?

Does it mention evaluation?



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What tense does the writer use to describe the project aims?

What tense is used to describe the 'Designing and Building' section?



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What grammatical form do you notice in the extracts:

‘The content and structure of the language learning activity will be established’

‘...the blueprints that will be used to build the skill.’

‘These will be based on the language activity...’



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‘...the blueprints that will be used to build the skill.’ *passive form*

I will use the blueprints to build the skill *active form*

Errors from requirement analysis/ methods section

For those questions that can not solved based on the...

probabilities will be compared then choose the one that have bigger probability

two robust machine learning models that commonly used for machine comprehension task

Second, interview was conducted to gain a better understand of the user

The easy way is to simply doubled the number of children of the root XML

For data that used for testing, we prepared several...

The first one is using input device, which performs some measures...

the user does not need to wear any extra device and just need some cameras...

Errors from requirement analysis/ methods section

For those questions that cannot be solved based on the...

probabilities will be compared then the right one will be chosen, which has the greatest probability

two robust machine learning models that are commonly used for machine comprehension task

Second, interviews were conducted to gain a better understanding of the user

The easy way is to simply double the number of children of the root XML

For data that is used for testing, we prepared several...

The first one is using the input device, which performs some measures...

the user does not need to wear any extra device and just needs some cameras...



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Common errors

Use of passive forms

Use of articles

Subject - verb agreement



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<https://www.phrasebank.manchester.ac.uk/describing-methods/>



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Writing the literature review:

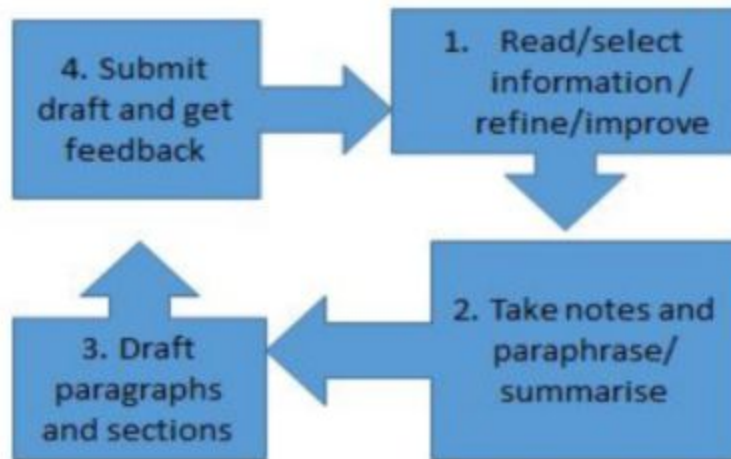
Working with sources

Avoiding plagiarism



Reading & Writing processes

- Circular (not linear)
- Notes are a bridge to writing



Differences between paraphrasing, summarising and quoting

Paraphrasing

Presenting all the key information from the author's original work, but with significant change in wording and structure of the information. Paraphrasing focuses on IDEAS not words. Paraphrases must be accompanied by citations. Retain the original meaning.

Summarising

Presenting the key points of the original author's work, but not necessarily everything they said. Summaries should be shorter than the original work and include effective paraphrasing. Summarised information must be accompanied by citations.

Quoting

Using the author's exact words. This should be indicated with quotation marks (40 words or less), or with a new line and indentation (more than 40 words). Must be accompanied by citations. Use sparingly.



Paraphrasing: true or false?

1. When paraphrasing, the first thing you should do is check the dictionary for synonyms.
2. You should always directly paraphrase the original words.
3. You should start paraphrasing as soon as you start reading (e.g. sentence by sentence).
4. You should take notes in bullet point form.
5. You should think about the grammar of the original text (e.g. word order, word class, choice).
6. You should make should make sure you understand the original content + form.
7. You should make sure that you can explain the meaning to someone without looking at the original text.



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1 – F

2 – F

3 – F

4 – T

5 – T

6 – T

7 – T



Put the stages of summarising in the correct order:

- a) Compare your summary to the original - check the meaning is the same
- b) Read the original text and get a full grasp of it. You may need to re-read the original source a few times and look up the meaning of key words to fully understand it.
- c) When reading, ask yourself: What is the overall message? What are the key points?
- d) Put the source aside and state its key points in your own words. When you can do this, you are ready to write your summary.
- e) Concentrate on the essentials and leave out details and examples.



Stages of summarising

1. Read the original text and get a full grasp of it. You may need to re-read the original source a few times and look up the meaning of key words to fully understand it.
2. When reading, ask yourself: What is the overall message? What are the key points?
3. Concentrate on the essentials and leave out details and examples.
4. Put the source aside and state its key points in your own words. When you can do this, you are ready to write your summary.
5. Compare your summary to the original - check the meaning is the same.



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There are two kinds of plagiarism:

1. Copying word for word from a source.
2. Using an idea/information from a source without giving a citation.



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Is it plagiarism or not?

	Situation	Yes/no
1	Copying a paragraph, but changing a few words and giving a citation	
2	Cutting and pasting a short article from a website, with no citation	
3	Taking two paragraphs from a classmate's essay without citation	
4	Taking a graph from a textbook, giving the source	
5	Taking a quotation from a source, giving a citation but not using quotation marks	
6	Using something that you think of as general knowledge, e.g. large areas of the rainforest have been cut down in recent years	
7	Using a paragraph from an essay you write and had marked in the previous semester, without citation	
8	Using the results of your own research, e.g. from a survey without citation	
9	Discussing an essay topic with a group of classmates and using some of their ideas in your own work	
10	Giving a citation for some information, but mis-spelling the author's name.	



Every time you use another person's research, writing or ideas in your academic writing, you must tell the reader where it comes from in TWO ways.

1. In-text citation
2. References at the end of your essay (alphabetical order)

They need to match up > The surname is used in both!



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Author-prominent citation:

Castilho et al. (2018) also report that post-editing NMT is not faster for all language pairs investigated in their study.

Information-prominent citation:

The post-editing tasks were carried out with Translog-II (Carl, 2012).



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We need to use reporting verbs when we mention ideas and information from other writers' work.



Which reporting verbs do you notice in the extract?

Research on CAD education began when a two dimensional version of the software was introduced. Advances in computer software and hardware have resulted in 3D CAD capabilities that shift the research to focus on utilization of 3D CAD tools in design and product development process (Wang et al., 2002). Researchers started examining students' skills and capabilities in using the software while producing computer generated engineering models (Hamade and Artail, 2008). Lang et al. (1991) identified knowledge in CAD as declarative and procedural knowledge. They state that declarative knowledge consists of the facts of the situation and includes knowledge of the object being drawn and knowledge about the particular commands which can be used on particular CAD systems. Bhavanani et. al. (2000) explained the meaning of declarative knowledge in CAD as knowing what the software is all about and what it can produce. Chester (2006) proposed a declarative command knowledge which is concerned with specific procedures used by individuals to secure familiar objectives such as extrude and revolve. He states that it is knowledge about the commands or algorithms that are available within 3DCAD.



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Read through the following list of common reporting verbs and decide whether you would use them:

- a) to report on the aim of a study/research
- b) the results of a study/research
- c) to report an author's opinion

Investigate show (that) state (that) Believe (that) focus on demonstrate (that)
analyse

find (that) explore conclude (that) indicate (that) note (that) consider reveal
(that)

point out (that) Identify examine look at report (on) confirm (that) hold (that)

claim (that) suggest (that)



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Giving aims

Investigate

Focus on

Analyse

Explore

Examine

Look at

Giving results

Show

Demonstrate

Find

Reveal

Confirm

Suggest

Reporting opinions

State

Believe

Conclude

Consider

Hold

Suggest

Claim



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How many sources are cited in the citation below:

Post-editing domain-specific texts has often been found to be faster than HT (O'Brien 2007; Guerberof 2009; Groves and Schmidtke 2009; Tatsumi 2009; Plitt and Masselot 2010).



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What does the citation mean?

Post-editing domain-specific texts has often been found to be faster than HT
(O'Brien 2007, cited in Hemmings 2014)



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Secondary referencing

This is when you reference one author who is referring to the work of another and the primary source is not available (refer to the primary source where it is available).

Secondary referencing should be avoided where possible.

When do I need to include page numbers in a citation?

When you use a quotation, or paraphrased information from a particular page in a source, you need to give page numbers.

For example: (Zhao, 2017, p.42)



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If you refer to the general ideas or findings of the source as a whole, you don't need to include a page number.



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What do I do if an article has seven authors? Do I write them all in the citation?



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You can include the names of up to three authors in a citation. If there are four or more authors, give the name of the first author followed by *et al.*

For example, (Chen *et al.*, 2017)



Common problems with citations/references

1. Unreferenced material - missing citations
2. Citations only at the end of paragraphs - unclear which ideas come from the source
3. Articles are cited in the text but not in the reference list.
4. Secondary citations used incorrectly.



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After you finish an assignment, check your referencing before you submit it.



ARTICLE

The magic triangle of macroeconomics: how do European countries score?

Heinz Welsch

OXFORD: Oxford University Press **ISSN:** 0030-7653 **EISSN:** 1464-3812 **DOI:** 10.1093/oep/gpq020

Oxford economic papers, 2011-01-01, Vol.63 (1), p.71-93

“ This paper studies the macroeconomic performance of the EU-12 member countries over 1990... ”



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PERMALINK



E-MAIL

MLA (7th edition)

APA (6th edition)

Chicago/Turabian (16th edition)

MLA (8th edition)

Harvard 1

Heinz Welsch, 2011. The magic triangle of macroeconomics: how do European countries score? *Oxford economic papers*, 63(1), pp.71–93.



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<https://www.sheffield.ac.uk/library/idlt/referencing>