



THE UNIVERSITY *of* EDINBURGH

English Language Education

# Academic Language & Literacy for Informatics

## Writing your Project Proposal

Style & Language

Organisation

Feedback & Feedforward

Language Help available to you

## **IPP Learning Outcomes – a reminder**

On successful completion of this course, you should be able to:

- 1.** critically evaluate research literature or other prior work appropriate for your project subject
- 2.** use existing research literature or other prior work to justify choices in experimental design, theoretical goals, and/or implementation
- 3.** develop a structured project proposal
- 4.** outline project/research management issues and potential legal, social, ethical or professional issues

## Aim of THIS session

- to help you produce a clear, concise and stylistically appropriate *Project Proposal*.

The language and conventions covered here should also help you produce a well-written *Dissertation*.



## Preamble

### **Academic writing is about persuasion.**

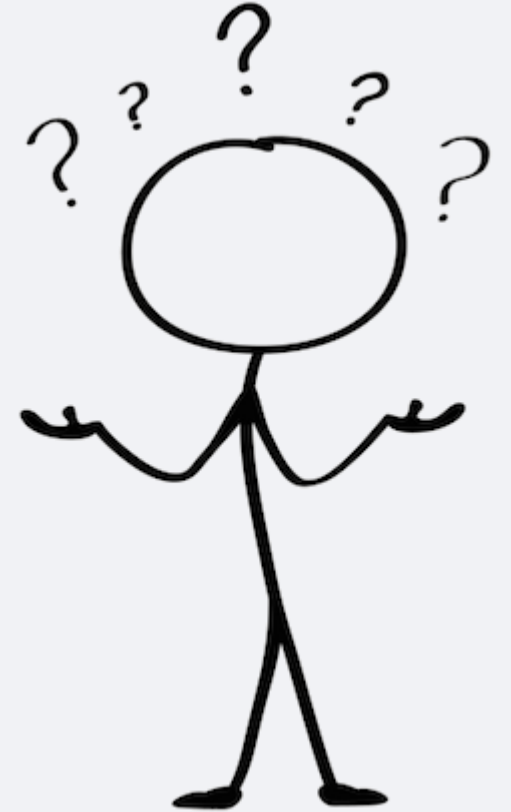
You need to convince your reader:

- That the question is important.
- That the question can be answered.
- That you can do the work to answer it.



A common question to begin...

Is it OK to use personal pronouns?



An example: Notice the switch:

Image segmentation is the first stage of image processing in many practical computer vision systems. The development of static image segmentation algorithms has attracted considerable

Goldman et al [1] present several applications that can be realised by using tracked 2D object motion. One application is the video-to-still composition where a video stream can be used to

The need for metadata describing high level components in the video, such as objects and motion trajectories, is common to a wide range of applications, so the methodology adopted in this project will be applicable across different domains. Having said that, the required format and type of metadata might vary across applications. Thus in this project we will focus on fulfilling the needs of a rich media application interface which will be capable of incorporating visual tagging for authoring rich media such as hyperlinked videos.

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## An example.

Thus, in this project **I/we** will focus on ...

**My/Our** hypothesis is that ...

In this report, **I/we** will propose a plan for evaluating **my/our** hypothesis.

In the next section, **I/we** will give a ... which will be a key element in **my/our** methodology

In section 4, **I/we** will present a ...

In section 5, **I/we** will proceed by discussing ...

An example.

Thus, this project will focus on ...

It is hypothesized that ...

This report will propose a plan for evaluating the hypothesis.

The next section will give a ... which will be a key element in  
the methodology

Section 4 will present a ...

Section 5 will discuss ...

Expressing confidence



Boosting

Hedging

## Expressing confidence

perhaps, admittedly, may,  
possibly, likely, probably,  
predominantly, presumably,  
seems, appears, may, suggests,  
to some extent, sometimes,  
often, around, roughly, fairly,  
usually

is, are, will be, believe,  
know, prove, certainly,  
indeed, always,  
undoubtedly, in fact,  
clearly, actually, firm,  
obviously, conclusively,  
definitely, evidently,  
straightforward

## Using verbs



### Verbs

- Use of tenses
- Active vs Passive forms

### Avoid

**X** Contracting verb forms  
(formality)

1. Look at the exemplar project proposals.
2. Review your own use of language in your PP.



## Useful verbs in a research proposal.

- To determine ...
- This then enables ... This will ensure ...
- This is / may be dependent on...
- X typically occurs when...
- X is typically performed by ...
- I/We expect that/to ... [NB: Do **NOT** use **It is expected that**]
- I expect / anticipate ... [similarly with **It is anticipated that ...**]

Use verbs to describe actions, rather than nouns, but ... **cohesion:**

- We **analysed** a sample of the dust that was obtained from the dark side of the moon. **This analysis** revealed that...

## Organisational Principle.

1. Purpose

2. Hypothesis

3. Background

3.1 Specific Title

3.2 Specific Title

4. Methodology

4.1 Specific Title

4.2 Specific Title

5. Evaluation

6. Work Plan

References

1. Motivation

2.1 Specific Title

2.2 Specific Title

2. Background

3. Programme and Methodology

3.1 Specific Title

3.2 Specific Title

4. Evaluation

5. Expected Outcomes

6. Work Plan, Milestones and Deliverables

References

1. Motivation

2. Background

2.1 Specific Title

2.2 Specific Title

3. Methodology

3.1 Specific Title

3.2 Specific Title

4. Expected Outcomes

5. Ethics

6. Limitations, challenges and risks

7. Work Plan and deliverables

References

## Useful language.

- Background known
  - Present tenses (simple & perfect) & Reference to literature
- Gap / unknown / problem/ need
  - **However**, ... **Although** ..., **Despite** ..., **Nevertheless**, ...
- Aim / Hypothesis
  - **This project aims to** ...
  - **I hypothesize that** ...
- Significance/ impact
  - **This proposal serves to not only build/create/develop ... but also ...**
  - **Further research that builds on this project would** ...

## Identifying the gap or problem.

- gap in our knowledge
  - little evidence is available for ...
  - restricted by ...
  - not sufficiently ...
  - need for ...
  - there is growing concern ...
  - remains unclear
  - does not ... [achieve / offer ...]
  - there is no ...
  - a key/major drawback
  - impractical
  - inaccurate
  - inadequate
  - incompatible
  - limited
  - redundant
  - unrealistic
  - weak
  - narrow
- However, ...
  - Despite ...
  - Although, ...
  - Currently, ...
  - To date, ...

Useful language.

(Thus) This project/study

**aims to ...**

(Therefore)

**will build on ...** ~~X is going to~~

**will focus on ...**

**will set out to ...**

The purpose of this study **is to ...**

The objective is **to evaluate** the feasibility of ...

There **are** two primary aims of this study: 1. **To ...**

This **motivates** a ...



The methodology / procedure is similar to the ones you cite.

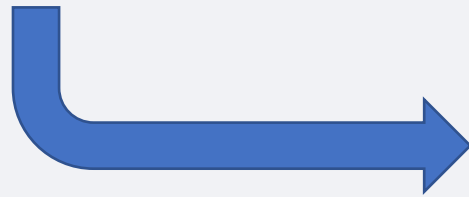
*The methodology selected will be / is intended to be....*

- a (slightly) modified version of ...
- adapted from ...
- based [in part] on/ partly on ...
- in line with ...
- in essence ...
- to modify/ to refine/ to revise ... [ BE SPECIFIC].

**And then explain how in detail!**

The intended procedure is significantly different from those you cite.

- Although in essence similar,
- Although in many ways similar,
- Although partially based on,



one novel step will be to  
**adapt / adjust / alter / change ...**

**THEN SAY** what you are altering in detail and **WHY!**

Justify the choices you make.

- To validate the results from X, data will be analysed using Y.
- For the sake of simplicity, only X will be analysed.
- The advantage of using three-dimensional analysis is that X.
- One advantage of using X is that Y.
- By partitioning the sample into three, I will be able to ensure X.
- The X will be Y, so allowing the Z.
- This should avoid issues with X or Y.

## Significance of Research.

The proposal should demonstrate the originality/usefulness of your intended research.

You should therefore explain why your research is important, for example:

- by explaining how your research builds on and adds to the current state of knowledge in the field

or

- by setting out reasons why it is timely to research your proposed topic.

## Establishing impact and significance.

- A current / common / crucial issue / focus
- A powerful tool / method
- Of great concern is
- Of growing [commercial] interest is
- attracting / generating widespread interest
- play(s) a key role in ... / a major part in ...
- For a number of years, ... / the last decade, ...
- The importance of ...
- typical(ly)
- well-documented
- widely recognised
- worth / worthwhile
- benefit / beneficial
- importance
- vital
- potential / possible / probable



Modelling patient flow can reveal important features of the operational system of the hospital, as well as give ideas for new measures that can improve the inefficiencies of the system and reduce waiting times. Furthermore, the medical community agrees that the management of patient flow can improve both the quality of care and patient satisfaction [3].

Various techniques have been employed to model patient flow in recent years, most of them not being able to represent accurately the topology of a real-world hospital[4]. In this project, network analysis and process mining techniques will be used to analyse patient flow of two acute hospital sites of King's College Hospital NHS Foundation Trust. The capabilities of these techniques will help to create more representative models.

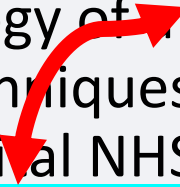
...

It is worth noting that this project is one of the first to include gender and age attributes to the modelling of patient flow. Using the two aforementioned techniques, we aim to ...

Source: Patient flow analysis using process mining techniques and network analysis.

Modelling patient flow can reveal **important** features of the operational system of the hospital, as well as give **ideas** for **new** measures that can **improve the inefficiencies** of the system and **reduce waiting times**. Furthermore, the medical community **agrees** that the management of patient flow can **improve** both the **quality** of care and patient **satisfaction** [3].

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...

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A proposal is about showing you understand the possibilities.

- By doing *X*, the intention is to *Y*.
- I expect to achieve ...
- This should mean that ...
- This could lead to *X*.
- Potentially, ... Presumably, ...
- It seems plausible that ...
- Manageable / feasible

## How will you 'measure success'? The Language of Evaluation

X will be evaluated  
measured

**in terms of / for ...**  
**on the basis of ...**  
**against a set of ...**  
**in a more qualitative way**

X **will be used to evaluate** the ...

I will **evaluate and compare** the ...

The objective **is to evaluate** the feasibility of X as a Y

## Writing to be read

- Writer responsibility – what does your reader need to know?
- Organisation & Clarity
- Paragraphing
  - Topic sentences & linking
- Information flow [theme & rheme]
  - cohesion
  - repetition
  - This/These + noun phrase
- Keeping the reader on board: explaining what you're doing
  - “Meta-language”

## “Meta-language”

In the next section, we will discuss different techniques that the scientific community used to model patient flow and discuss the results of last year’s work.

-----

Below, the most common techniques are presented, namely Queueing models, Simulation models, Process mining, and network analysis.

-----

We will further discuss the methodology for point selection and tracking in section 4.

-----

As we will discuss in the next section, constraints such as proximity, maximum velocity, small velocity change, common motion, rigidity and proximal uniformity can help to not only overcome the correspondence problem but also detect physical objects [4].

## Abstract.

### Include:

- Background
- Unknown/ problem/need
- Overall objective
- General strategy/methodology/approach
- Significance/ impact.
- Clearly identify the overall objective

The abstract isn't like a movie trailer, so don't worry about "plot spoilers"!



## Abstract.

British hospitals are constantly failing to meet the targets set by the UK government. Precisely, the last six years, goals regarding the accident and emergency department have not been achieved. Evidently, there is a need for change in the operational systems of British hospitals. This project aims at using network analysis and process mining techniques to analyse the patient flow of two acute hospital sites at Kings College hospital. The data set that will be used contains information about patient transfers between wards that occur between X&Y. This analysis can help professionals to improve the inefficiencies of the system and reduce waiting times. This work builds on a project done by a student last year in which only a small subset of the data set was used due to limitation of time. Furthermore, the results of a previous study, in which network analysis was used, will be used for comparison. Specifically, an investigation of how patient flow has changed since then will not be carried out, while at the same time the patient gender and age information that was not used in the previous study space dash space will be used to capture different aspects of patient flow.

Background

Problem/need

Overall objective

General approach

Impact



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Background

Problem/need

Overall objective

General approach

Impact

Avoid these common errors in postgraduate research proposals:

- Problem is not important
- Rationale is weak
- Writing is vague
- Uncertain outcomes
- Proposal is unfocused and lacks sufficient detail

(adapted from MIT

[https://ocw.mit.edu/courses/biology/7-16-experimental-molecular-biology-biotechnology-ii-spring-2005/scientific-comm/lec03\\_resch\\_prop.pdf](https://ocw.mit.edu/courses/biology/7-16-experimental-molecular-biology-biotechnology-ii-spring-2005/scientific-comm/lec03_resch_prop.pdf))

## Using feedback for feed forward

- Formative and summative
- Formal and informal
- Feedback vs feedforward

## Using feedback for feed forward

- Understanding feedback / feedforward
- Marking criteria
- RAG: Red, Amber, Green
- Things to stop doing
  - work on/develop
  - continue doing

## Using feedback for feed forward

Assignment			Key Learning points to feed forward		
Action	Topic & Motivation	Academic Writing	Quality of argumentation	Quality & use of Referencing	Quality of conclusion
<b>RED</b>					
<b>AMBER</b>					
<b>GREEN</b>					

Language Help available to you

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- organise, link and develop your ideas



## Graduate Writing Centre

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### Study Hub learning resources

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## Home Page

### GENERAL LANGUAGE FUNCTIONS

- Being Cautious
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- Classifying and Listing
- Compare and Contrast
- Defining Terms
- Describing Trends
- Describing Quantities
- Explaining Causality
- Giving Examples
- Summarising Transition
- Writing about the Past

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- <https://arts.uottawa.ca/writingcentre/en/hypergrammar/building-sentences>
- <https://arts.uottawa.ca/writingcentre/en/hypergrammar/writing-paragraphs>

## Academic Writing in the Sciences

- <https://sites.duke.edu/scientificwriting/>

## Writing clearly, concisely & precisely

- <https://www.monash.edu/rlo/research-writing-assignments/writing/clear-communication/writing-clearly-concisely-and-precisely>
- <https://natureofwriting.com/courses/sentence-structure/lessons/concise-sentences-2/topic/concise-sentences/>
- <https://www.scribbr.com/academic-writing/write-concisely/>



## Bibliography and Further Reading

Aliotta, M. (2018) *Mastering Academic Writing in the Sciences: A Step-by-Step Guide*. Boca Raton: CRC Press

Glasman-Deal, H. (2021) *Science Research Writing for native and non-native speakers of English*. 2<sup>nd</sup> Edition. Singapore: Imperial College Press.

Heard, S.B. (2016) *The Scientist's Guide to Writing: How to write more easily and effectively throughout your scientific career*. Princeton: Princeton University Press.

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