

UNIVERSITY
OF MALAYA

Preparing Research Proposal

WOX7001

What is a Research Proposal?

Key part of the graduate application process
for *self-proposed* projects



What is a Research Proposal?

Meanings in the Oxford online dictionary

Research means “the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions”.

Proposal means “a plan or suggestion, especially a formal or written one, put forward for consideration by others”.

What is a Research Proposal *for*?

Key part of the PhD application process for *self-proposed* projects

Defines your
research question
(**what** you intend to
study and **why** this
topic needs to be
studied)

Outlines your
methodology and
approach
(**how** you intend to
study)

Demonstrates your
suitability for the
project
(**who** will benefit this
study)



What is a Research Proposal?

- The word '**research**' has been widely used in everyday speech.
 - It is used to describe a variety of activities such as finding a piece of information or taking notes and then writing a research paper.
 - It may refer to the act of informing oneself about what one does not know, perhaps by searching unsystematically through available sources to locate few small bits of information.
 - Although these activities has been called research, accurately they have other names: information gathering, library skills, and documentation.
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What is a Research Proposal?

Research is a systematic process of collecting data, analyzing, and interpreting them in order to increase our understanding of a phenomenon about which we are interested or concerned (Leedy & Ormrod, 2013).

A research proposal is a written report presenting the plan and underlying rationale of a future study (Gravetter & Forzano, 2011).



Who is a Research Proposal for?



Good Proposal Demonstrates Three Things:

Your project is worthwhile

Your project is viable

You are capable of completing it



Your project is worthwhile :

- ✓ Originality
- ✓ Value
- ✓ Outcomes



How can you be *original* ?

Study something completely new!

- ❖ New primary sources
- ❖ New theory
- ❖ New topics / events / interactions

1

Fix Something!

- ❖ Gaps in the existing studies
- ❖ Limitations in the existing methodologies

2



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Compare and combine

- ❖ Interdisciplinary
- ❖ Comparative study



Proposal Writing and Anxiety : Proposal-specific Advice

- ✓ Understand that the proposal will be negotiated-- be prepared to revise!
- ✓ Think of the proposal as an introduction to your thesis or dissertation.
- ✓ Remember that the proposal is **not** a binding contract.
- ✓ Remember that your proposal is not meant to limit ideas, but to help you think practically.
- ✓ Ask colleagues to form a writing group.
- ✓ Talk to your advisor / supervisor!



Research Cycle

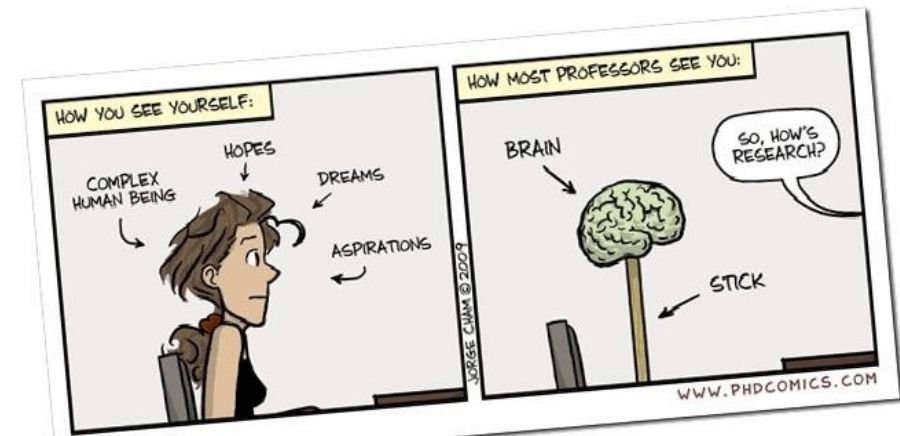


What Makes a Good Research Proposal?

- A good research proposal is based on **scientific facts** and on the art of **clear communication**.

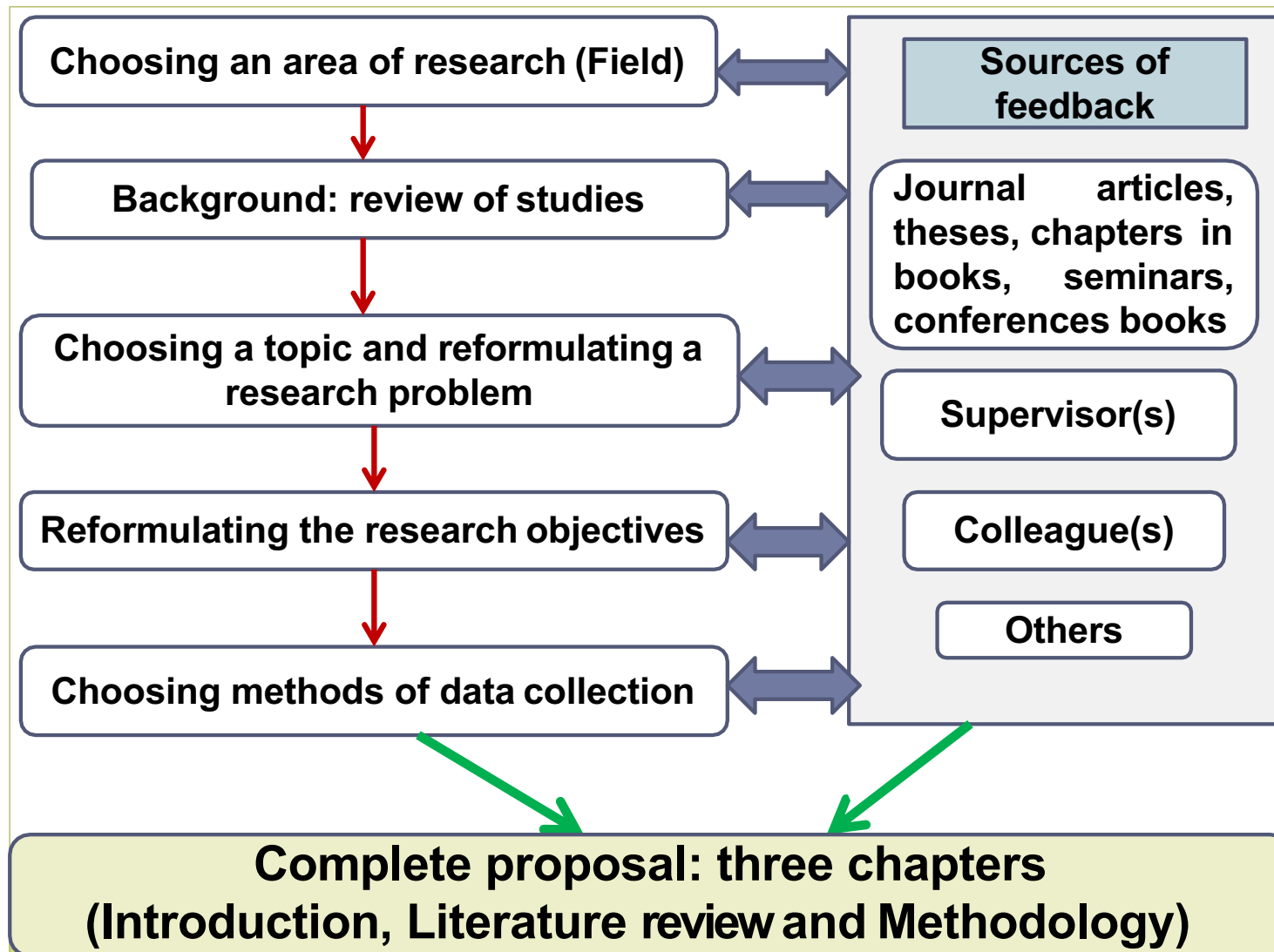
3C's

- **Clear:** When you write, you are clear about your goal/aim.
- **Concise:** Stick to the point and keep it brief. Your audience don't want to read four sentences if you can communicate in two sentences.
- **Coherent:** All points are connected and relevant to the topics.

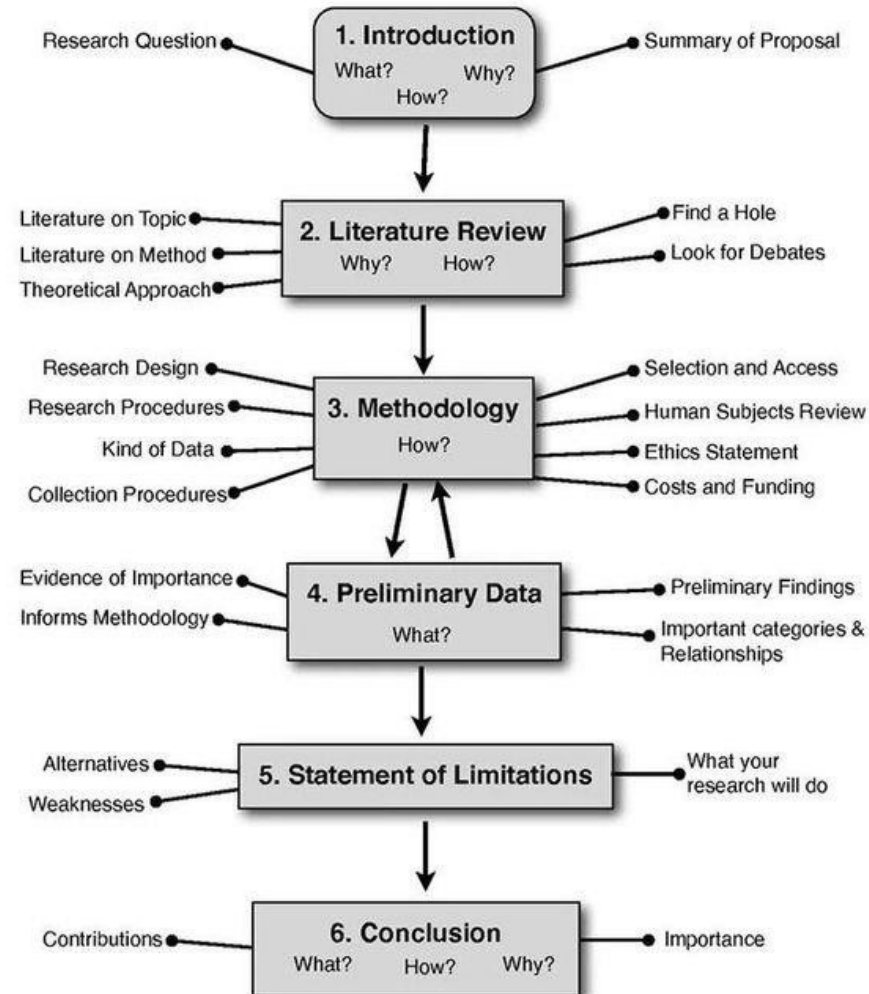


Basic Structure of Research Proposal





Research Proposal Flow Chart



Title of proposal

The title summarizes the **main idea** or ideas of your study. A good title contains the **fewest possible words** needed to adequately describe the content and/or purpose of your research works.



Example of Research Titles

- 1) Arabic Pronunciation Scoring Using Acoustic Features And Deep Learning
- 2) Anti-wear and Extreme Pressure of Sulfur Based Lubricant Additive
- 3) A Hybrid Multi-objective Optimisation For Energy Efficient And Coverage In Underwater Wireless Sensor Networks
- 4) The Long Run Effects Of Conventional Fiscal Stimulus Components On Real Economy
- 5) Measuring The Dimension Of Quality Assurance In Higher Education In Oman: A Statistical Approach



Writing an Abstract

Provide a brief (100-350 word) overview of the proposal.

Summarize important elements (Introduction, Statement of the Problem, Background of the Study, Research Questions or Hypotheses, and Methods and Procedures).



Example of Abstract

Objective

Problem statement

The Black-Bellied Plover (*Pluvialis squatarola*) is a shorebird species threatened with becoming endangered because of the loss of habitat through twentieth-century urbanization. As a step toward preventing this species from becoming endangered, this report identifies the Black-Bellied Plover habitat in Louisiana. To identify the habitat, the report examined information about Black-Bellied Plover sightings in Louisiana over the last 50 years and the landuse categories derived from satellite imagery of the sighting locations. These examinations indicate that the Black-Bellied Plover habitat in Louisiana is generally pasture and shrubland. To protect this species, the Louisiana Department of Parks and Wildlife or the private sector should conserve and monitor this habitat, especially in the areas where the most frequent sightings have occurred on Grand Isle and around Caillou Bay.

Method

Expected Outcome

Introduction / Background

- ✓ Establish the general territory (real world or research).
 - ✓ Describe the broad foundations of your study - provide sufficient background for readers.
 - ✓ Indicate the general scope of your project.
 - ✓ Provide an overview of the sections that will appear in your proposal (optional).
 - ✓ Engage the readers.
-

Statement of the Problem

- ✓ Put the problem in **context** (what do we already know?)
 - ✓ Describe the **precise issue** that the research will address (what do we need to know?)
 - ✓ Show the **relevance** of the problem (why do we need to know it?)
 - ✓ Set the **objectives** of the research (what will you do to find out?)
-

Step 1: Contextualize the problem

The problem statement should frame your research problem in its particular context and give some background on what is already known about it.

In the past ten years, the “gig economy” has become an increasingly important segment of the labour market. Under-30s are more likely to engage in freelance, contracted or zero-hour work arrangements instead of traditional full-time jobs. Research on the reasons for and consequences of this shift has focused on objective measures of income, working hours and employment conditions, but there has been little work exploring young people’s subjective experiences of the gig economy.

Step 2: Show why it matters

The problem statement should also address the relevance of the research: **why is it important that the problem is solved?**

This doesn't mean you have to do something groundbreaking or **world-changing**. It's more important that the problem is **researchable, feasible, and clearly addresses a relevant issue in your field.**

In the literature on the gig economy, these new forms of employment are sometimes characterized as a flexible active choice and sometimes as an exploitative last resort. To gain a fuller understanding of why young people engage in the gig economy, in-depth qualitative research is required. Focusing on workers' experiences can help develop more robust theories of flexibility and precarity in contemporary employment, as well as potentially informing future policy objectives.

Step 3: Set your aims and objectives

Finally, the problem statement should frame how you intend to address the problem. Your goal should not be to find a conclusive solution, but to seek out the reasons behind the problem and propose more effective approaches to tackling or understanding it.

*This project aims to **better understand** young people's experiences in the gig economy. Qualitative methods will be used to gain in-depth insight into the motivations and perceptions of under-30s engaged in freelance and zero-hour work across various industries. This data will be contextualized with a review of recent literature on the gig economy and statistical analysis of demographic changes in the workforce.*

Developing Strong Research Questions

- ✓ Choose a broad topic
- ✓ Do some preliminary reading to find out about topical debates and issues
- ✓ Narrow down a specific niche that you want to focus on
- ✓ Identify a practical or theoretical research problem that you will address

When you have a clearly-defined problem, you need to formulate one or more questions. Think about exactly what you want to know and how it will contribute to resolving the problem.

Example: Mapping of Research Problem and RQ

Example research problem	Example research question(s)
The teachers at school X do not have the skills to recognize or properly guide gifted children in the classroom.	What practical techniques can teachers at school X use to better identify and guide gifted children?
Under-30s increasingly engage in the “gig economy” instead of traditional full-time employment, but there is little research into young people’s experiences of this type of work.	What are the main factors that influence young people’s decisions to engage in the gig economy? What do workers perceive as its advantages and disadvantages? Do age and education level have an effect on how people experience this type of work?

Type of Research Questions

Research Question Type	Formulation
Descriptive research	<i>What are the characteristics of X?</i>
Comparative research	<i>What are the differences and similarities between X and Y?</i>
Correlational research	<i>What is the relationship between variable X and variable Y?</i>
Exploratory research	<i>What are the main factors in X? What is the role of Y in Z?</i>
Explanatory research	<i>Does X have an effect on Y? What is the impact of Y on Z? What are the causes of X?</i>
Evaluation research	<i>What are the advantages and disadvantages of X? How well does Y work? How effective or desirable is Z?</i>
Action research	<i>How can X be achieved? What are the most effective strategies to improve Y?</i>

Example of Research Questions



Is X or Y a better policy?

Why does X occur?

What effect does social media have on people's minds?

Has there been an increase in homelessness in the UK in the past ten years?



How effective are X and Y policies at reducing rates of Z?

What are the main factors contributing to X?

What effect does daily use of Twitter have on the attention span of under-16s?

How have economic and political factors affected patterns of homelessness in the UK over the past ten years?



How to write a literature review

- ✓ A literature review is a survey of scholarly sources on a specific topic. It provides an overview of current knowledge, allowing you to identify relevant theories, methods, and gaps in the existing research.
- ✓ A good literature review **doesn't just summarize sources** – it **analyzes**, **synthesizes**, and **critically** evaluates to give a clear picture of the state of knowledge on the subject.

Unsynthesized Example

Franz (2008) studied undergraduate online students. He looked at 17 females and 18 males and found that none of them liked APA. According to Franz, the evidence suggested that all students are reluctant to learn citations style. Perez (2010) also studies undergraduate students. She looked at 42 females and 50 males and found that males were significantly more inclined to use citation software ($p < .05$). Findings suggest that females might graduate sooner. Goldstein (2012) looked at British undergraduates. Among a sample of 50, all females, all confident in their abilities to cite and were eager to write their dissertations.

Unsynthesized Example

- Weaknesses of the shortest path algorithms were analyzed and Improved Dijkstra's Algorithm was proposed by Xu et al. [4]. Xiaoyong and Xueqin presented a heuristic algorithm that considered both transfer criterion and distance criterion for route selection [5]. Jian-lin explained that Dijkstra's Algorithm was not appropriate for route selection and proposed a new algorithm that was based on least number of transfers [6]. Wu and Hartley presented a study that used K-Shortest Paths Algorithm and proposed the optimal path among the K-Shortest Paths by taking the user preferences into consideration [7]. Ferreira et al. proposed a new advisor system based on the integration of various data sources and they used a Dijkstra's Algorithm implementation in this system [8].
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How to write a literature review

Synthesized Example

Studies of undergraduate students reveal conflicting conclusions regarding relationships between advanced scholarly study and citation efficacy. Although Franz (2008) found that no participants enjoyed learning citation style, Goldstein (2012) determined in a larger study that all participants watched felt comfortable citing sources, suggesting that variables among participant and control group populations must be examined more closely. Although Perez (2010) expanded on Franz's original study with a larger, more diverse sample...

How to write a literature review

- ✓ Step 1: Search for relevant literature - Make a list of keywords
 - ✓ Step 2: Evaluate and select sources - You probably won't be able to read absolutely everything that has been written on the topic – you'll have to evaluate which sources are most relevant to your questions.
 - ✓ Step 3: Identify themes, debates, and gaps
 - ✓ Step 4: Outline your literature review's structure – Chronological – Thematic – Methodological – Theoretical
 - ✓ Step 5: Write your literature review
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Methodology in a research proposal

Research type

- Will you do [qualitative or quantitative research](#)?
- Will you [collect original data](#) or work with [primary or secondary sources](#)?
- Is your research design descriptive, [correlational](#), or [experimental](#)?

Sources

- Exactly what or who will you study (e.g. high school students in New York; Scottish newspaper archives 1976-80)?
- How will you select subjects or sources (e.g. [random sampling](#), [case studies](#))?
- When and where will you collect the data?

Research methods

- What tools and procedures will you use (e.g. [surveys](#), interviews, observations, experiments) to collect and analyze data?
- Why are these the best methods to answer your research questions?

Practicalities

- How much time will you need to collect the data?
- How will you gain access to participants or sources?
- Do you foresee any potential obstacles, and how will you address them?



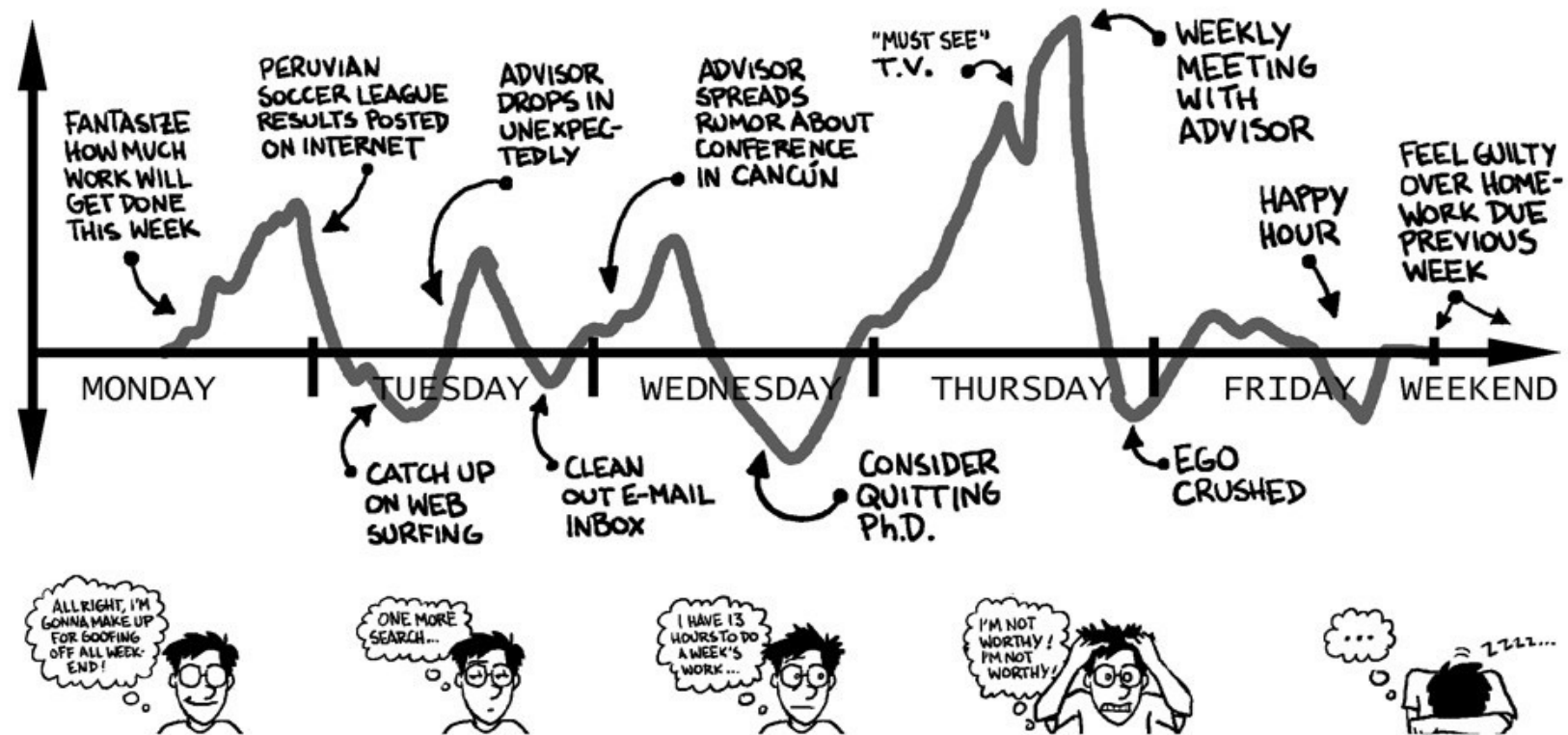
You are capable of completing it :



- ✓ Qualifications / Experience
- ✓ Dedication
- ✓ Training needs
- ✓ Ambition (sell yourself)



Grad Student Work Output



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