

Lecture 3: Structuring your research proposal

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Method of Assessment	Percentage Weighting	Learning Outcome Being Assessed	Date of Submission
CA1	80%	All 5	9 th Week
CA2	20%	All of 5	12 th Week

CA1:

Assessment Title & Description:	Assignment 1
Task:	Research Proposal
MIMLOs being assessed:	1,2,3,4,5
Individual/Group:	Individual
Assessment Weighting:	80%
Issue Date:	2 nd week
Submission Date: (All assignments must be submitted through Moodle)	9 th week
Feedback Date:	11 th week

Assessment Title & Description:	Assignment 2
Task:	Research Presentation (based on proposal)
MIMLOs being assessed:	1,2,3,4,5
Individual/Group:	Individual
Assessment Weighting:	20%
Issue Date:	6 th week
Submission Date: (All assignments must be submitted through Moodle)	12 th week

Basic research

Purpose:

- expand knowledge of processes of business and management
- results in universal principles relating to the process and its relationship to outcomes
- findings of significance and value to society in general

Context:

- undertaken by people based in academia
- choice of topic and objectives determined by the researcher
- flexible timescales

Impact:

- initially academic community and researcher
- may also impact policy and practice

Applied research

Purpose:

- improve understanding of particular business or management problem
- results in solution to problem
- new knowledge limited to problem
- findings of practical relevance and value to manager(s) in organisation(s)

Context:

- undertaken by people based in a variety of settings including organisations and academia
- objectives negotiated with originator
- tight timescales

Impact:

- initially policy and practice community and researcher
- may also impact academia

Characteristics of good research ideas- Appropriateness



Meeting Requirements

The generated research idea and developed proposal must align with the requirements, including considerations like data collection methods and subject matter relevance.

Use of Existing Theory

Utilizing existing academic theory is emphasized in developing the research idea and proposal. This not only helps in clarifying the research concept but also informs the overarching research question, aim, and objectives.

Assessment Criteria and Discussion

Awareness of assessment criteria is crucial, including consideration of theoretical context. Project tutors often stress the importance of a well-defined **research question, aim, and objectives**, and students are encouraged to discuss uncertainties with their tutors.

Fresh Insights vs. Completely New Ideas

Fresh insights are deemed valuable in research proposals, and there are various ways to define such insights. However, caution is advised when claiming a completely new research idea, with consideration given to the possibility that **the idea may already exist, be misplaced in the literature search, or lack intrinsic value.**

Symmetry of Potential Outcomes

Ensuring symmetry in potential outcomes is highlighted, indicating that findings should hold value regardless of the specific results. This prevents investing time in research that may yield insignificant or uninteresting results and emphasizes the importance of having scope for an engaging project report.

Personal Capability

Ensure your research aligns with your skills and comfort level, recognizing that some skills may be challenging to acquire within the project timeframe.

Resource Availability

Consider the feasibility of obtaining financial and time resources, as some projects may be impractical due to constraints or require resources beyond what is available.

Data Access

Verify that you can reasonably secure access to the necessary data, especially for topics involving potential access challenges or sensitive information, and discuss any concerns with your project tutor.

Write up a reflection 100-200 words based on this class



Box 1.4

Checklist of questions to ask yourself when making reflective diary entries

In relation to each experience. . .

- ✓ What has gone well?
 - Why has it gone well?
 - So what does this mean in relation to my research?

- ✓ What has not gone so well?
 - Why has it not gone so well?
 - So what does this mean in relation to my research?
- ✓ What adjustments will/did I make to my research following my reflection?

Looking back. . .

- ✓ How could I have improved on the adjustments made?
 - Why?
- ✓ What key themes have emerged over several entries?
- ✓ How will I apply what I have learnt from each experience to new situations?

1. Reflective

1. **Definition:** Reflective refers to the act of contemplation, thoughtful consideration, or the ability to think deeply about one's experiences, actions, or knowledge.
2. **Example:** In the context of learning or education, a reflective practitioner might engage in self-assessment and thoughtful analysis of their teaching methods or experiences.

2. Reflexive

1. **Definition** Reflexive, on the other hand, generally refers to the relationship between a subject and its own actions or processes. It can also imply an awareness of one's own position or perspective.
2. **Example** In social sciences or research, a reflexive approach involves acknowledging and critically examining the researcher's influence on the study, recognizing that the researcher is part of the research process.

Key Differences

Focus Reflective focuses on thoughtful consideration, contemplation, and introspection. It involves looking back on experiences or actions.

Relationship Reflexive, in a broader sense, deals with the relationship between a subject and its actions. It involves an awareness of the influence of the subject on the process or context.

Examples in Context

Reflective Example: A reflective essay may involve a person looking back on their life experiences, considering their personal growth, and evaluating lessons learned.

Reflexive Example: In qualitative research, a reflexive approach involves the researcher acknowledging and addressing their own biases, assumptions, and positionality within the research process.

Dear Diary,

Today has been quite eventful in our software development journey, and I find myself reflecting on my role and the impact of my decisions within the project. Here's a reflexive entry capturing some key moments:

During the morning stand-up, I shared updates on the progress of my assigned tasks. As I listened to my team members, I realized the importance of effective communication in a collaborative environment. I noticed that my choice of words influenced team morale, and I made a mental note to ensure clarity and positivity in my future updates.

In the afternoon, we had a code review session. While providing feedback on a colleague's code, I became aware of my own biases and preferences. This reflexive realization prompted me to reevaluate my feedback, ensuring that it was constructive and focused on improving the overall code quality rather than personal coding styles.

I had a discussion with our product owner about a change request. I noticed a moment of hesitation in expressing my concerns about the suggested modifications. Upon reflection, I realized that my hesitation stemmed from a fear of conflict. This reflexivity made me aware of the importance of fostering open communication, even in moments of disagreement, to ensure the best outcome for the project.

In our collaborative work session, I observed how different team members approached problem-solving. I found myself appreciating the diversity of perspectives within the team. This reflexivity led me to actively seek input from team members with varying expertise, realizing that a holistic approach benefits the project more than individual insights.

This week's experience

Part 1:

I am to spend a minimum equivalent of 15 minutes of writing time per day each week (Gray, 2020). Here is my writing record:

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Total
Actual time I wrote	0	11 pm–1 am	0	0	0	2–3.30 pm	0	X
Time spent writing*	0	2 hours	0	0	0	1.5 hours	0	3.5 hours min.
Writing focus		Lit review				Writing Centre; edits		

* Note: 'Writing time' includes any time working to communicate your research with words, such as outlining, revising, editing, writing paragraphs that will someday appear in the final paper, writing paragraphs that will never appear in the final paper and writing the final presentation (not the generation) of numbers in tables or graphs.

Part 2:

This week Monday–Sunday I worked on improving my literature review on two different days and met with the support staff at the University's Writing Centre. I reckoned what I had written for my literature review was not that good and was hoping to learn how to improve it.

The person I met with in writing support was only able to help me with a few small things like referencing, most of which I already knew. However, I was asked to read my work out loud, and I was surprised by how much that helped. It made punctuation errors clearer.

I really want to improve my writing techniques, but I am not sure about how to do that. Speaking with the writing support person was not as useful as I hoped it would be. When I have asked my friends to read my work and be honest, they say it is 'fine'. But I hate it when I turn in the 'fine' draft and my paper comes back 'bleeding', covered in questions and corrections from my instructor. It's clear that I need to start thinking and writing more critically. After visiting the Writing Centre, I should be able to read my own work and see the flaws in my own arguments. I suppose I want to write better so people can't poke holes in what I am writing and criticise me. By my next draft, I should have cut the number of track change comments by half.

As for the literature review itself, I drew upon notes I made while studying abroad in Ghana. While there, I observed a microcredit lending program for women who wanted to run their own stands at the local street market. I found a few research reports written by international aid organisations, but I have had some trouble finding peer-reviewed sources that address the topic and population I'm studying for my research project. Since it's a newer area of study, I'm hoping these sources will suffice.

Questions

- 1 Which parts of Michael's journal entry, if any, were reflective or reflexive? Give reasons for your answer, including the evidence you used to inform your assessment.
- 2 The journal entry was to consist of two parts: first, a table that summarises data points about his writing practices for the week; and second, a critical reflection of his research process and content. To what extent, if any, did Michael fulfil these requirements? Is there a better way he could have approached and written the research journal entry? In your answer, state how you assessed the entry and include examples that illustrate your point. If you think there was a better approach, describe it.
- 3 Imagine you are Michael's project tutor and you need to give him feedback. Reread his entry, making comments throughout it. While critiquing and commenting, be sure to note what he has done well and provide specific feedback on what he could do to strengthen it.

- Ownership and Responsibility:** Emphasizes that the research project is a significant component of the course and underscores the researcher's responsibility for conceiving, conducting, and concluding the project. It highlights the individual ownership of the research.
- Importance of a Research Proposal:** Stresses the value of developing a research proposal as an opportunity to carefully plan the research project. The proposal serves as a guide and checklist for evaluating the project, providing a clear specification of the research's what, why, how, when, and where.
- Demanding but Worthwhile Process:** Acknowledges the demanding nature of developing a research proposal, involving thoughtful consideration of objectives, literature synthesis, and envisioning the entire research process. Despite the time-consuming nature, it emphasizes that the effort is likely to be highly worthwhile in providing clarity and guidance throughout the research project.

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Box 2.11 **Checklist to guide and evaluate your research proposal**

- ✓ Have I explained what am I going to do?
- ✓ Have I explained why I am doing this?
- ✓ Have I said why it is worth doing?
- ✓ Have I explained how it relates to the research that has been done before in the subject area?
- ✓ Have I stated which theory or theories will inform what I am doing and how I will use it or them?
- ✓ Have I stated my overarching research question(s), research aim and my research objectives or investigative questions?
- ✓ Have I outlined how I will conduct my research?
- ✓ Have I outlined my research design?
- ✓ Have I outlined what data I need?
- ✓ Have I stated who and where my intended respondents or participants are?
- ✓ Have I explained how I will select my respondents or participants?
- ✓ Have I explained how I will gain access?
- ✓ Have I outlined how I will collect my data?
- ✓ Have I outlined how I will analyse my data and use this to develop theoretical explanations?
- ✓ Have I outlined what data quality issues I might encounter?
- ✓ Have I outlined how I will seek to overcome these data quality issues?
- ✓ Have I considered the ethical issues I might encounter at each stage of my research?
- ✓ Have I outlined how I will address these?

- **Coherence and Lucidity** Highlighting the importance of coherence and lucidity in the research proposal to demonstrate its fitness for guiding the research project. Assessors look for evidence of clear writing that aligns with the purpose of directing research activities.
- **Ethical Considerations** Emphasizing the ethical considerations involved in the approval process, especially when dealing with human participants. Discusses the need for ethical approval, addressing data storage, participant anonymity, and confidentiality. Awareness and adherence to university and professional institute ethical requirements are crucial.
- **Feasibility** Acknowledging that a well-structured proposal may not always be feasible due to time constraints, resource availability, or practicality. Feasibility is a multifaceted criterion, and assessors consider whether the proposed research can be achieved within the available time and resources.
- **Discussion with Tutor** Recommending discussions with a tutor about the research proposal, especially when concerns arise regarding coherence, ethical issues, or feasibility. Such discussions provide an opportunity to amend initial ideas and ensure that the proposed research is achievable.
- **Avoiding Preconceived Ideas** Encouraging researchers to approach the project with an open mind and avoid preconceived ideas. The research project should be seen as a valuable learning experience with transferable skills. It cautions against overenthusiasm and insincerity, urging researchers not to assume they know the answers before conducting the research.

- **Clarity and Precision** - Choose a research title that clearly conveys the essence of your study. It should succinctly capture the main focus and purpose of your research. Avoid vague or overly complex titles, and strive for clarity and precision in communicating the subject matter.
- **Relevance and Significance** - Ensure that your research title reflects the relevance and significance of your study. It should convey the importance of your research topic within the broader academic or practical context. A good title should pique the interest of potential readers or audiences by highlighting the significance of the research problem you are addressing.
- **Keywords and Searchability** - Incorporate relevant keywords into your research title to enhance its searchability and discoverability. Consider terms and phrases that potential readers or researchers might use when searching for literature or resources related to your topic. This not only aids in academic visibility but also helps your research reach the right audience.

Abstract

House sales are determined based on the Standard & Poor's Case-Shiller home price indices and the housing price index of the Office of Federal Housing Enterprise Oversight (OFHEO). These reflect the trends of the US housing market. In addition to these housing price indices, the development of a housing price prediction model can greatly assist in the prediction of future housing prices and the establishment of real estate policies. This study uses machine learning algorithms as a research methodology to develop a housing price prediction model. To improve the accuracy of housing price prediction, this paper analyzes the housing data of 5359 townhouses in Fairfax County, Virginia, gathered by the Multiple Listing Service (MLS) of the Metropolitan Regional Information Systems (MRIS). We develop a housing price prediction model based on machine learning algorithms such as C4.5, RIPPER, Naïve Bayesian, and AdaBoost and compare their classification accuracy performance. We then propose an improved housing price prediction model to assist a house seller or a real estate agent make better informed decisions based on house price valuation. The experiments demonstrate that the RIPPER algorithm, based on accuracy, consistently outperforms the other models in the performance of housing price prediction.

Abstract

Fully automated yield estimation of intact fruits prior to harvesting provides various benefits to farmers. Until now, several studies have been conducted to estimate fruit yield using image-processing technologies. However, most of these techniques require thresholds for features such as color, shape and size. In addition, their performance strongly depends on the thresholds used, although optimal thresholds tend to vary with images. Furthermore, most of these techniques have attempted to detect only mature and immature fruits, although the number of young fruits is more important for the prediction of long-term fluctuations in yield. In this study, we aimed to develop a method to accurately detect individual intact tomato fruits including mature, immature and young fruits on a plant using a conventional RGB digital camera in conjunction with machine learning approaches. The developed method did not require an adjustment of threshold values for fruit detection from each image because image segmentation was conducted based on classification models generated in accordance with the color, shape, texture and size of the images. The results of fruit detection in the test images showed that the developed method achieved a recall of 0.80, while the precision was 0.88. The recall values of mature, immature and young fruits were 1.00, 0.80 and 0.78, respectively.

This section has three related functions which are to:

1. introduce the reader to the research issue or problem;
2. provide a rationale for your overarching research question and aim;
3. ground your research in the academic literature.

1. Introducing the Research Issue Begin by addressing the question "what am I going to do?" Clearly articulate the research issue to engage the reader's interest. Provide a rationale for your overarching research question and aim, justifying your choice. This rationale should encompass your personal interest, intellectual curiosity, potential career direction, and the perceived value of the work, referencing relevant literature.

2. Rationale for the Research Answer the question "why am I going to do this?" by presenting a well-founded rationale. This involves demonstrating your interest in the topic and providing evidence that it is a subject you are committed to exploring. Justify the worthiness of the research by aligning it with one of the following types of academic justification: applying a theory to a specific context, developing a theory within a research setting, or testing a theory within a given context.

3. Grounding in Academic Literature Ground your research in the academic literature to showcase your knowledge of relevant research and its connection to your proposal. Demonstrate how your research relates to previous studies and clarify its position within the existing literature. While not a detailed literature review, provide an overview of key literature sources and theories that will inform your research, laying the groundwork for the comprehensive literature review in the final project report.

- Constitutes a significant portion of the research proposal.
- Comprises subsections on **research philosophy, design, participants, techniques, procedures, and ethical considerations**.
- Ethical considerations may warrant a dedicated section within the proposal.
- Research Philosophy and Design:
 - Research philosophy clarity is essential, impacting subsequent research design.
 - Research design involves methodological choices, such as quantitative, qualitative, or mixed methods.
 - Justify and describe each element cohesively, aligning with the overall research philosophy.
- Influence of research design on **data type, source**, and collection methods.
- Specify details about collecting primary data, including participants, organization, sector, and location.
- Describe sampling techniques, sample size, and data collection/analysis methods without delving into precise details.
- Discuss **ethical considerations**, particularly crucial for human participants and when using secondary data.
- Demonstrate forethought in formulating the research design to minimize ethical concerns.
- Sensitivity to ethical considerations is advisable even for macro-level, anonymized data.

Divide the research project into distinct **stages or tasks**.

Estimate time for each stage or task, aiding in assessing project feasibility.

Devising a timescale enables **monitoring of progress** and adjustments to the schedule.

Consider using a **Gantt chart**, a visual representation of project stages, timings, and task relationships.

Tasks listed in columns, with each row indicating a timescale.

Length of horizontal bars represents estimated time for each task, providing a clear overview.

Allocate time for **holidays** (e.g., Christmas and New Year) within the chart.

Recognize sequential task dependencies, such as completing revisions before questionnaire administration.

Acknowledge additional project requirements, like maintaining a **reflective diary** (bar 20).

Anticipate that the research process may **take longer than expected**.

Regularly **update the timescale**, indicating where additional working hours are needed.

Use the **Gantt chart as an effective project management tool** for various types of projects.



Box 2.13

Focus on student research

Louisa's research timescale

As part of the final year of her undergraduate business studies degree, Louisa had to undertake an 8000–10,000-word research project. In order to assist her with her time management, she discussed the following task list, developed using Microsoft task and reminder setting app 'To Do', with her tutor, noting she had still to fully develop her overarching research question.

Planned By Due Date x ...

All Planned Overdue Today Tomorrow This Week Later

Fri 7 Oct

- Develop clear overarching research question
Tasks · Fri, 7 Oct 2022

Fri 26 Nov

- Read and noted literature
Tasks · Fri, 26 Nov 2022

Fri 16 Dec

- Draft literature review leading to clear research objectives emailed to project tutor
Tasks · Fri, 16 Dec 2022

Fri 23 Dec

- Read methods literature for both primary and secondary data collection
Tasks · Fri, 23 Dec 2022

Fri 10 Feb

- Literature review revised in response to project tutor's comments
Tasks · Fri, 10 Feb 2023

Fri 3 Mar

- Secondary and primary data collected and analysed to meet research objectives
Tasks · Fri, 3 Mar 2023

Fri 28 Apr

- Analysis completed and findings chapters written
Tasks · Fri, 28 Apr 2023

Fri 26 May

- Draft of project report completed (everything!) and sent to tutor
Tasks · Fri, 26 May 2023

Fri 9 Jun

- Draft revised in response to project tutor's comments
Tasks · Fri, 9 Jun 2023

Mon 12 Jun

- Project submitted (11:59 a.m. deadline)
Tasks · Mon, 12 Jun 2023



Exercise- Generate an initial Research Plan



Activity	October				November				December				January				February			March			April				May					
Week number	1								9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Holiday																																
Read literature																																
Develop aim and objectives																																
Draft critical literature review																																
Read methodology literature																																
Devise research approach																																
Draft research proposal																																
Develop questionnaire																																
Pilot test & revise questionnaire																																
Administer questionnaire																																
Enter data into computer																																
Analyse data																																
Draft findings chapter																																
Update literature																																
Complete remaining chapters																																
Submit to tutor																																
Revise draft & format																																

up next....

Lecture 4:

Conducting A Literature Review

Write up a reflection 100-200 words based on this class



Box 1.4

Checklist of questions to ask yourself when making reflective diary entries

In relation to each experience. . .

- ✓ What has gone well?
 - Why has it gone well?
 - So what does this mean in relation to my research?

- ✓ What has not gone so well?
 - Why has it not gone so well?
 - So what does this mean in relation to my research?
- ✓ What adjustments will/did I make to my research following my reflection?

Looking back. . .

- ✓ How could I have improved on the adjustments made?
 - Why?
- ✓ What key themes have emerged over several entries?
- ✓ How will I apply what I have learnt from each experience to new situations?