Postgraduate Computing

Applied Research Project Guidebook

Contents

Getting Started

This Guidebook outlines the minimum requirements for completing a postgraduate student designed Applied Research Project. The Guidebook is not intended to be exhaustive, rather it is intended to point you in the right direction and answer any questions you may have before they arise. Among other things it includes a checklist with which you can track your progress towards completion, and it outlines the rules and regulations for preparation and submission of your Applied Research Project. This is made up of three required components:

- Applied Research Project report (mini-dissertation or -thesis, 50% of final module mark)
- Artefact (a practical product or output, 40% of final mark)
- Oral presentation or *viva* (10% of final mark)

Bear in mind that **it is you who are conducting the research and not your supervisor**. Therefore, the research you intend to conduct should be manageable, that is, that you can complete it in the allocated time. The Proposal in your Research Methods set out proposed timelines and the amount of work to be undertaken, and as you undertake your Project, these timelines and the workloads will need careful monitoring, much like any industry-situated project you may take on after graduation.

Remember the support materials available on the Applied Research Project Moodle page are there to support you through the process, and in addition **you can request online tutorials** in **quantitative (SPSS training)** and **qualitative analysis (NVivo training)** techniques using appropriate software packages, when you are nearing your data analysis stage of your research, these tutorials are dependent on availability and it is recommended that you review through all of the step by step supporting materials available via Moodle before requesting additional support (email andrew.browne@dbs.ie for more details when you reach your data analysis stage).

Best of luck.

Dr. Andrew Browne
Postgraduate Business Applied Research Project Coordinator
Email: andrew.browne@dbs.ie

To contact your programme coordinator and other general queries, you can log a ticket in the Service Desk: https://students.dbs.ie/dashboard/SCCM

Applied Research Project

You are reading this Guidebook because you have chosen the option of an Applied Research Project for your Level 9 capstone submission. If you meant to choose another capstone option on your programme, you **MUST** contact your Programme Coordinator at the earliest opportunity – any submission made for this module will be graded as such, and cannot be transferred to be considered under another capstone grading criteria.

This section explains definitions and some key features of an Applied Research Project. **Please note that the Applied Research Project must include an artefact and demonstration of that artefact which will be detailed further.** Your supervisor will guide you on these key points when you undertake your chosen pathway.

Typical structure for an Applied Research Project report in many disciplines is four to five chapters including:

1. Introduction, context and identification of problem or gap
2. Policy and Reports and other relevant literature review
3. Research Plan, Methodology and Design
4. Proposed solution or Appropriate Development/Implementation (Key features)
5. Conclusions and Future Work

Please note, small changes can be made to the chapter headings based on the project and with the approval of the supervisor.

What is an Applied Research Project?
Applied Research Project is an industry-focused research report and solution to a problem or issue. **The purpose of an Applied Research Project is to practically solve an existing real-world, industry problem and the design and presentation of an artefact to practically address this problem**. The purpose of an Applied Research Project report is to collect information to help address an identifiable problem in a specific setting. The Applied Research Project artefact then uses a real-world, industry focussed solution to address a real-world, industry-focussed problem.

What are the key features of an Applied Research Project?
The Applied Research Project include**s a report (50%) which will be a maximum of 10,000 words in total which you will produce alongside the final unique Artefact (40%). You will also be expected to present and demonstrate your artefact (10%)** as the demonstration of such an item shows the learner's ability to solve a real-world issue and move from an idea or concept, through to a prototype or tangible solution.

What an Applied Research Project is not:
An Applied Research Project is not advanced research on a specific topic whereby the learner reviews academic literature, critically analyses and synthesises research data and presents findings in the form of an extended written dissertation. However, in some cases, the applied research can contribute to our understanding and extend our knowledge of research.

How is an Applied Research Project different from a traditional dissertation?
A dissertation is an extended, **written piece of advanced research on a chosen topic area**. A traditional dissertation aims to answer a research question in a specific domain while creating universal knowledge, while an Applied Research Project explores and applies this knowledge to solve

specific industry problems. Unlike a Dissertation, the Applied Research Project must include an artefact. However, it should be noted that both, Dissertation and Applied Project Report need to be research-focussed and follow the same **scientific standards** of validity and reliability in terms of methodology, literature review etc. Both also include extended written aspects that capture the problem, research approach and findings/ solution, and both are expected to adhere to the principles of academic integrity in research practice.

Artefact

What is an artefact?

An artefact is an important aspect of the Applied Research Project. It is the tangible evidence that you have found a solution to the problem you present. The artefact demonstration is your opportunity to demonstrate the output from the Applied Research Project and to demonstrate your solution to the problem you have identified. The production of an artefact allows the learner to demonstrate evidence of independent research and provide insights into how the real-world problem identified can be solved, implemented and evaluated.

What are examples of an artefact?

An artefact can be a tool, a product or a set of experiments relevant to the field of study. The process consists of empathising with a problem domain, defining a problem or hypothesis, ideation of potential solutions, prototype or methodological design and implementation of the artefact to tackle problems relevant to business proposals or entrepreneurial ventures. Examples of the product include but are not limited to: a website, an app, a learning resource, a piece of software, a training and development programme, a manual or handbook, a piece of code, data mining project, machine learning implantation, development of an AI model etc.

Artefacts likely focus on tangible products or outputs such as those cited as examples above. However, they may also focus on 'research through design'. This is where the production of artefacts is explicitly driven by a research problem that is a practical real-world problem but one where the output is a more conceptual one. e.g. one that is process-oriented but continues to address the industry problem of interest. The process of developing and presenting usually involves several phases of refinement, e.g. may develop a pilot advertisement campaign using specific theory and design elements (if feasible may test in a pilot situation), refine and develop a final model. Or may take an existing problem and create a new process/modify an existing one or method to resolve, may also include the development/use of or incorporation of technologies. See Part III below for the Marking Guides to learn more about how the Applied Research Project components are graded.

Assessment Details and Submission Deadlines

Assignment	Weighting	Deadline
CA1: **Artefact**	40%	7 January 2026 (in Moodle)
CA2: **Applied Research Project report**	50%	7 January 2026 (in Moodle)
CA3: **Oral Presentation/ Artefact Demonstration/ Viva**	10%	To be arranged with your supervisor after submission of your Applied Research Project report

1. The submitted **Applied Research Project - industry-focused research report and artefact**, along with the subsequent **oral presentation** will be assessed by two internal examiners who will be appointed by the Postgraduate Business Applied Research Project Coordinator. Of these internal examiners one is normally the supervisor. If there are any unresolved differences between the two internal examiners in opinion on the matter relevant to the student's assessment, such differences shall be resolved by bringing in a third internal examiner. See Part III of this guide for the assessment sheets used to mark the Applied Research Project, artefact and oral presentation (which can be done via Zoom, if necessary). More details about what is expected in terms of your artefact and your oral presentation can be confirmed by your supervisor.

2. The **Applied Research Project - industry-focused research report** coursework submissions must comply with the following format rules:
   - ➢ The Applied Research Project shall be **10,000 words (-/+ 10%) excluding Title Page, Table of Contents, Abstract, Acknowledgements, Appendices and References**.
   - ➢ **Electronic copies** of your **Applied Research Project** sent to your supervisor **by email.**
   - ➢ **Electronically upload your Applied Research Project and artefact on Moodle** to the Applied Research Project page. Please log on to Moodle to access support materials and information on the Applied Research Project page.
   - ➢ The Applied Research Project shall be written in the English language, in good quality typescript. In the body of the Applied Research Project, text should be double-spaced. Single spacing should only be used for Abstract, appendices, footnotes, and long quotations (40 words or more).
     The Applied Research Project shall contain the following sections: Cover page, Table of contents, Acknowledgements, Abstract, Introduction, Introduction, Overview, Main Body, Conclusions, Appendices, and References.
   - ➢ Your primary research files (or link to secondary data sources) should be uploaded to the relevant portal on the Applied Research Project Moodle page e.g. qualitative interview transcripts or audio recordings, and quantitative data spreadsheet (if applicable). Failure to submit these may invalidate your entire Project submission and result in a failing grade or Academic Impropriety finding.
   - ➢ Links to the library deposit agreement and e-Applied Research Project submission forms can be found on the Applied Research Project Moodle page. This addresses putting your Applied Research Project on the DBS E-Source repository.

3. The **artefact/product demonstration** is the opportunity to demonstrate the output from the Applied Research Project. The production of an artefact or product allows the learner to demonstrate evidence of their proposed solution to the industry problem and provide insights into how it can be implemented and evaluated. The demonstration of such an item shows the learners ability to move from ideation, through to prototype and solution.

IMPORTANT INFORMATION:

First Class Honours:	70% or higher
Second Class Honours:	60-69%
Pass:	40-59%

The pass mark is 40%.

A pass mark must be achieved by the overall module (i.e. the combination of your Artefact, Applied Research Project Report, and Oral Presentation/Demonstration/Viva grades at a 40:50:10 weighting).

Students are permitted two attempts at Applied Research Project, with the second attempt grade capped at pass mark (40%).

General Assessment Submission Requirements for Students:

1. All assignments must be submitted no later than the stated deadline (date and time).
2. Assignments submitted after the latest deadline specified (including any approved extension deadline) are considered late and penalised according to the Quality Assurance Handbook (QAH) **Part B Section 5.2.2.6** as follows:
    a. A penalty of 2 marks will be applied per day or part thereof (including weekends and public holidays) for an ongoing failure to submit beyond the submission deadline.
    b. A supervisor has the right to refuse to mark the assignment if the submission instructions have not been observed.
    c. Where a late assessment is submitted within 14 days of the deadline, and is of a passing standard, the late penalty is capped (such that the minimum grade that can be awarded is 40% for the late submission).
    d. Where a late assessment is submitted more than 14 days after the deadline, it will receive 0%.
3. Extensions to assignment submission deadlines will not be granted, other than in exceptional circumstances. To apply for an extension please go to https://students.dbs.ie/dashboard/SCCM and open a ticket.
4. All relevant provisions of the Assessment Regulations must be complied with (see QAH B.5).
    a. Students are required to refer to the assessment regulations in their Programme Handbook, and on the Student Website.
    b. Dublin Business School penalises students who engage in academic impropriety (i.e. plagiarism, collusion and/or copying, ghost writing/ essay mills, improper use of Generative Artificial Intelligence software).
        i. Refer to the College's Generative AI Guidelines HERE for further information.
    c. Guides on referencing are available on the Library website: https://libguides.dbs.ie/referencing
    d. Text-matching analysis software is integrated in Moodle to generate a report regarding the degree of text-matching in a submission.
5. Students are required to retain a copy of each assignment submitted, until the issuing of a transcript indicating the mark awarded and the closure of the Appeal period (2 weeks following the release of final results).

a. Results can only be appealed following the release of final results, and the Appeal form must be submitted to the Registrar's Office within the Appeal period.
b. An appeal must be based on valid grounds (see the Appeals Policy QAH B.3.5), dissatisfaction with a grade is not sufficient grounds for an appeal.
c. Assignments must be appropriately packaged and presented.
d. All assignments should be submitted to the Moodle page by the deadline date.
e. Where a submission involves digital media (i.e formats other than Word, Powerpoint or PDF), it is the submitting students' responsibility to ensure the media is appropriately labelled, fully working and they must retain a copy.
f. Components of an assessment which are not included in the final submission cannot normally be subsequently accepted for grading. It is the student's responsibility to ensure their file is uploaded correctly.

6. Assignments that *breach* the word count requirements will be penalised. *There is a 10% discretion, either way, applicable in terms of word count.*

7. When you submit your assignment you will be asked to click on a button which will declare the following:

By ticking this box I am confirming that this assignment/exam is all my own work. Any sources used have been referenced. *I have read the College rules regarding plagiarism in the QAH Part B Section 3 and understand that penalties will be applied accordingly if work is found not to be my own. All work uploaded is submitted via Ouriginal, whereby a text-matching report will show any similarities with other texts.*

Can Generative Artificial Intelligence be utilised in this assignment?

The level to which Generative Artificial Intelligence (GenAI) may be used in the Applied Research Project will depend heavily on the project itself, and it should be discussed with your supervisor where you intend to use it, and what it is being used for, and you should only proceed where the supervisor confirms this is acceptable. The use of GenAI in the Research Report or Artefact must be explicitly declared and identified in these submissions.

Where GenAI is used without authorisation or approval, or is not declared and identified, or excessively contributes to the final outputs, learners may be penalised, reviewed for academic misconduct, and/or be awarded a failing grade.

Part I: Planning and conducting your Research

First Things First: What do I have to do?

Listed below are all the required steps, in the general order that they should be started, for completing an Applied Research Project. Many of these steps will continue throughout the duration of your research and should be developed in consultation with your research project supervisor.

	Tick	Steps
1		Select an interesting and manageable topic for your research project.
2		Background reading (books, journals, and electronic reference sources) and remember to take note of what you think will be key references.
3		Discuss the idea for your Applied Research Project with your supervisor. Receive authorisation for any use of GenAI in your Project.
4		Continue background readings and delve deeper into the issues relating to your overall research focus.
5		Formulate the problem to be explored.
6		Obtain a letter granting access to participants/data sources if appropriate. For secondary data access this may need to be arranged in advance.
7		Fine tune the design and approach to the research of your Applied Research Project and questions based on feedback from your supervisor.
8		Contact participants. (if appropriate).
9		Gather your data. Take notes of any problems which may arise whilst you gather your data, so that you can discuss these in the Main Body section of your Applied Research Project.
10		Begin to write the Introduction and Overview sections of your Applied Research Project.
11		Your supervisor can provide feedback on pieces of your work (i.e. Introduction and Overview draft) but it will not receive a mark.
12		Develop your artefact.
13		Write the Main Body section of your Applied Research Project. Sometimes this section needs to change as your research proceeds over time. This is fine, as long as you can explain to your supervisor why your Method/Formula/Code section has changed. Typically, the body of a paper is organized into a hierarchical structure, with numbered or unnumbered headings for sections, subsections, sub-subsections, and even smaller sections (see Samples).
14		The subsection titles will vary depending upon your research project and you must discuss this with your supervisor. Listed are just a few examples, Sample, Design, Data, Type Changes and Special Characters, Math Equations, Code Development, Tables, Figures and Theorem-like Constructs.
15		Analyse your outcomes and write the Main Body Results (or appropriate outcome) Section

16		Write the Abstract and the Reference section of your Applied Research Project. Collate your Appendices.
17		Draw the Applied Research Project report and artefact together, ensuring there is consistency in style and presentation across all sections of the Applied Research Project. Format the Applied Research Project.
18		Submit your **Artefact (40%) and Applied Research Project (50%), plus contact supervisor to arrange** presentation and **demonstration (10%) date and time.**
19		Submit your raw data set to Moodle.

Selecting an interesting and manageable topic for your applied research project

- ➢ The area you choose to explore must be one that you are able to conduct on your own.
- ➢ You need to consider how long the research will take, what kind of equipment you require, and whether your intended research will be ethically acceptable.
- ➢ Your Applied Research Project cannot be a direct replication of an already existing solution; you must modify it in some way.

A quantitative research Applied Research Project (for Data Analytics) involves the scientific analysis of data. The data is usually collected as part of a study that employs an experimental, psychometric, or observational paradigm. However, it is possible to use data collected elsewhere, such as financial statistics. Such data must be treated analytically with statistical or other techniques that are appropriate to the type of data in question.

In relation to a qualitative Applied Research Project, this must have a clear problem statement and aim and be conducted in a rigorous manner in order to appropriately answer the problem statement.

Furthermore, you may also use a mixed-methods approach to examine your study, that is, conducting both quantitative (e.g. closed answer questionnaire responses) and qualitative (e.g. open answer questions on a questionnaire or interviews). Your Applied Research Project must make clear the relevance of the data to the existing literature within the area. In some cases, an extensive body of literature may not exist. In such cases it is particularly important to demonstrate how the data fits in with mainstream academic concepts.

Begin background reading and form a Problem Statement

You should make use of all the resources made available to you. It is important to check that your research Applied Research Project has not already been completed before. You can do this by checking electronic reference sources available in the library and on the Internet. Such sources include:

- ➢ The DBS library has extensive resources and offers a range of online classes that can help you produce a high standard Applied Research Project, use this link to access those resources https://libguides.dbs.ie/guides/business/home
- ➢ DBS Esource contains those Applied Research Projects that attain a 2.1 or above which can be useful to examine previous work completed by business students.
- ➢ Google Scholar can be useful to examine previous work in the area and current trends. In most cases it will just provide abstracts, but this is a useful place to start to develop an understanding of the area.

You should ask a member of staff in the DBS Library to help you when you use the electronic databases for the first time. When conducting your background reading (literature review), take notes on the information you find. You will need this information to help you form a Problem Statement and to help you write the Context/Research Approach/Proposed Solution of your Applied Research Project. It is a good idea at this stage to write down references for all the material that you use. There is nothing worse than wasting hours of your time trying to find a reference for a study or results of a study that you wish to include in your Applied Research Project.

The Problem Statement is made after your initial review of the key literature and before you begin to collect data if applicable. You should indicate how you arrived at your particular statement and what you think the key references are which relate to your proposed research project. However, these also need to be thoroughly reviewed in the research development process.

Sample selection (if you need data collection)
You are actively encouraged to use a sample that does not consist of other students, family or friends. You should clearly identify your sample to your supervisor and obtain written permission that allows you to access the sample, if necessary. Do not rely on verbal permission and be realistic in your sample choice. If you require a letter of introduction please contact the postgraduate business Applied Research Project coordinator, Dr Andrew Browne (andrew.browne@dbs.ie).

The use of primary and secondary data:
The Applied Research Project should be empirical in substance and come from either an original investigation by the learner (primary data), or data collected by a lecturer or available from any number of public user forums.

The use of secondary data may take the form of conducting selected analysis of existing data sets that have been collected often for other purposes by the project supervisor (or her or his research assistant) or from data sets that are held in a public user form, e.g., Data Library. Proper credit must be given to the data collection source when such data are used.

The use of secondary data must be agreed with your project supervisor.
All forms of data have associated benefits and limitations in their usage in projects; learners should consult their lecturers and other students regarding their experience with these different data. In any project requiring data analysis, learners are expected to conduct their own analysis (whether qualitative or quantitative) and to be able to justify the methodological and decisions regarding analysis that have been made and procedures that have been undertaken. Learners are responsible for their own work. Any student may be asked to defend their work in a viva (oral examination) to confirm that they have completed their own analysis.

Decide on instruments and developing study

Prior to commencing the data collection phase, you need to decide on the measurement tools that you will use such as the questionnaires or the equipment in the case of an experiment or the questions in the case of qualitative methods of data collection. Make sure that you can gain access to the equipment/instruments.

Contact your research project supervisor

Once you have been assigned a supervisor, you should contact them at the earliest opportunity. Your supervisor will be your main point of contact from this point on. They will help you refine your research design and can review and approve any materials and methods you will use to collect your data. Key decisions, including the use of GenAI, should be discussed with your supervisor and you should maintain close contact with your research project supervisor throughout your research project. Please note that this is your research and not your supervisor's.

Research project log
The Research Project Log is a diary of your entire research project. It enables you to record what happened during your study as you conducted your work. The log is not compulsory, but it is recommended that you keep one. You will find that it will make your life a lot easier when things go wrong; it will remind you of sources of information and remind you why you made a particular decision when you did.

You should also record what you do to prepare for the data collection phase of your study, and what you do after the data collection phase of your study. Observations, particularly unexpected observations, made during your research should also be recorded. This information may be helpful when you come to write your Applied Research Project. Unexpected results and even mistakes, properly recorded, have led to some great discoveries. The log also provides some evidence that you actually conducted the research.

Fine-tune the design of the Applied Research Project

When designing your study, you should refer to the notes that you took during your research-based modules. Remember that in addition to defining your context and forming your Problem Statement, you need to think about the kind of data you will collect, how you will analyse it and how this will help you in the formulation of your solution or artefact.

A word of warning:
Your Applied Research Project should be a piece of independent work. You can expect your Applied Research Project supervisor to provide guidance and assistance at various stages but such guidance and assistance must be student driven. **The responsibility for completing your project is yours, not your research project supervisor.**

Applied Research Project Supervision

RESPONSIBILITIES OF SUPERVISORS

2.1 Knowledge of Rules and Procedures

Supervisors should be familiar with the rules and procedures of Dublin Business School. A supervisor should be fully aware of the academic schedule in the School calendar. Both learner and supervisor are responsible for ensuring compliance with all Dublin Business School programme regulations and requirements.

2.2 Meetings between Learner and Supervisor

It is recommended that learner and supervisor meet in person at least three times, but no more than five times, during the period in which learners are involved in their theses (meetings typically last 30 minutes but this may vary depending on individual needs). Meetings should be by appointment, and it is up to the learner to make themselves available to meet their supervisor. It is the responsibility of the learner to contact the supervisor to request a meeting. It is unreasonable of the learner to expect to be able to discuss their Applied Research Project with their supervisor outside of the allotted time and place.

The Supervisor is required to document meetings by completing an Applied Research Project Meeting/Monitoring Progress Report (Please see appendix).

This will enable the supervisor and the learner to monitor progress and to ensure that goals are being met.

The Role of the Supervisor

It is the responsibility of the supervisor to provide guidance, instruction, and encouragement in relation to the research project. They also should provide critical advice and feedback on your research idea, especially highlighting any possible ethical concerns.

Specifically, the supervisor should:

- ➢ Advise the learner on the establishment of a realistic timetable for the completion of the various requirements of the programme of research.
- ➢ Develop a relationship with the student conducive to research and intellectual growth.
- ➢ Guide the learner in the pursuit of knowledge and provide constructive criticism on a draft introduction.
- ➢ Sign off on questionnaire booklets, research designs and interview questions prior to the supervisee collecting data. However, the student must provide this information for this to occur.
- ➢ Reply to learner emails in a reasonable timeframe and provide feedback on a draft of introduction and literature review (approximately 2500 words) as indicated in marking sheets. This should be submitted approximately by week 6.

Your research project supervisor <u>will not</u>:

- ➢ Design your research project for you
- ➢ Find or provide you with a sample
- ➢ Collect your data
- ➢ Run your statistics
- ➢ Write your Applied Research Project report
- ➢ Read your entire Applied Research Project.
- ➢ Be responsible for you keeping to your timetable
- ➢ Be available 24 hours a day, seven days a week!!

Responsibilities of the learner

It is the responsibility of the learner to manage the project and to submit the associated completed work. It is an independent piece of coursework.

Specifically, it is the learner's responsibility:

- To make first contact with their supervisor.
- To keep in regular contact with their supervisor, updating them on progress and issues emerging in the project.
- Arrange appointments for formal meetings (it should not be discussions at the end of supervisor's lecture etc.).
- Develop a timeline to complete the work for the Applied Research Project report and artefact.
- Engage fully in research meetings and meet any deadlines.
- To have any questionnaire booklets, experimental protocols, research designs and interview. questions are signed off officially by your supervisor prior to data collection.
- To attend the research seminars class and engage with the associated material on Moodle for guidance on conducting research.
- To discuss any problems in the research with the supervisor and/ or the Postgraduate Coordinator.
- To arrange the sample and collect data and the appropriate storing of the associated materials in a secure location.
- To submit the Applied Research Project and associated documents on time and in the appropriate manner.

Applied Research Project Meeting/Progress Monitoring Report

Name of Learner: _____ Learner No.: _____

Name of Supervisor: _____ Meeting No.: _____

Date of meeting: _____

Location of meeting: _____

Review/Comment on Progress Made (since last meeting):

Topics/Issues discussed/addressed at meeting: Action Agreed/Progress expected before next meeting:

Overall Summary/Conclusion of Meeting:

Date of next meeting: _____

Signed: _____ *Supervisor*

Signed: _____ *Learner*

N.B. Complete and keep for records of each learner meeting (Copy for supervisor & learner).

Part II: Writing Your Applied Research Project

Introduction

For your Applied Research Project to be easily understood by whoever is reading it, and in order to comply with the rules and regulations laid down by Dublin Business School, there are certain

guidelines that need to be followed. These guidelines are outlined in this section of your Applied Research Project Guidebook. Follow these guidelines when writing your Applied Research Project.

Things you should know before you begin writing your Applied Research Project:

1. What is your Problem Statement? (think about the angles of the statement).
2. What is the issue?
3. What is the context?
4. Is it solvable?
5. If you are developing a product or output? Do you have the skillset? Is it feasible within the timeframe?
6. What are the tools and technologies that you need to complete the project? What type of methodology and design are you to use?
7. What research approach do you propose to use? (Remember – you should check any assumptions made to ensure that a particular solution is suitable, see notes from your support materials on the Applied Research Project Moodle page).
8. What level of solution will you propose?
9. How will you demonstrate this solution?
10. What decisions have you made, based on your Problem Statement, and have you answered it appropriately through your Proposed Solution and Artefact?

Sections of your Applied Research Project Report

Use the following section headings (You will add a few more sections later):

Begin all main sections on a new page.

TITLE

DECLARATION

ACKNOWLEDGMENTS

ABSTRACT

INTRODUCTION

OVERVIEW

MAIN BODY:

Subheadings specific to your applied research project as agreed with supervisor

CONCLUSION

APPENDIX

REFERENCES

Note: If you use too many acronyms then use a Glossary of terms.

General Advice

Write clearly – Make sure that your Applied Research Project is understandable. You have put in a lot of work conducting the research and the report as part of the Applied Research Project is the write-up of this work. Also there is no point spending a lot of time writing up the work if the reader cannot understand what you are saying. Always read over your work and get a friend to read over it. This ensures that others understand it.

Avoid using bullet points, writing in note form, or writing lots of overly short paragraphs as this will make your work appear disjointed. Your aim is to make your points flow from one to another to tell a clear story. Make sure to use spell-check when you are finished.

Use the passive writing style (write in the third person past tense). Don't use the first person (e.g. I, We, My etc).

For example you might want to write something like:
'The aim of this research project is to solve the problem of lack of take-up by financial providers of emerging technologies in the legal domain. This solution proposes an AI intervention that flags areas of concern and provides an automated red flag marker that facilitates early intervention and identification of key issues.'

Don't waffle – Keep it simple and present your ideas concisely. Just because you are writing in a scientific manner does not mean you have to use long words and complicated language. If you have a problem understanding what you are writing, so will your reader.

References – make sure you have properly referenced. Remember each piece of research that you cite should be referenced appropriately.

TITLE

The title should inform the reader simply and concisely what your study is about. It is important that the title is self-explanatory; and that you avoid irrelevant and misleading words. The title should not exceed **12 to 15 words**. It is important to the project and is often forgotten. A good title will sum up the research in one concise sentence.

Avoid making it long winded. It should be brief and snappy. 'An experimental AI solution to the lack of take up by financial providers in the area of emerging *technologies in the legal domain. This solution proposes an AI intervention that flags areas of concern and provides an automated red flag marker'* is quite long and could be shortened to: 'AI solution for Legtech'.

Learners regularly start their titles with 'An experiment...' or 'A study...' when there is no real need to do so. Keep it short and to the point. At the very minimum the title should include details of the variables and the nature of the main expected relationships between them and work around this.

ABSTRACT

The abstract is one paragraph that summarises your study. For an empirical study, its length should be no more than **150 words**. Type the abstract itself in a **single paragraph in block format indented on either side**. Type all numbers (except those that begin a sentence) as Arabic numerals (Arabic numerals are our traditional numbers 1, 2, 3 etc..). The abstract, like the title, should be self-explanatory and self-contained.

The abstract should include (a) the aim of the study, (b) a summary of the method, including where relevant a brief description of the materials, apparatus, participants, design, and procedure, (c) a synopsis of the main results, and (d) the conclusions drawn from the results.

In relation to reporting your findings in the abstract, it is not necessary to include statistical details or state exactly how the data were analysed in case of a data analytics project. It is often more concise to simply state in words your main findings. '*The analyses showed that football fans recalled significantly more players' names than rugby fans'* reads more fluently than '*SPSS was used to conduct a t-test and this showed that football fans recalled significantly more players' names than rugby fans (t(20) = 2.91, p < .05)*' for an abstract.

Do not include in the abstract any information that is not included in the main body of the report. It is a summary of all of the other sections. It also should be self-contained and the idea is that the reader should not have to read the whole Applied Research Project in order to be able to read the abstract. Therefore, you should not use abbreviations and terminology which are only explained in the Applied Research Project. Also, as you will not know what you have done until you have finished the study it is a good idea to leave writing this until the end. It will take more than one attempt to write the abstract in order to include all of the relevant information within the word count. Remember to re-draft it and refine it.

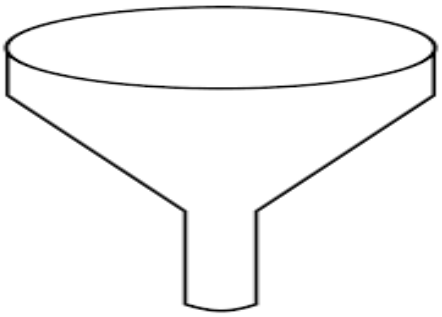
INTRODUCTION AND OVERVIEW

The literature review orients the reader to the research. It should answer a number of basic questions:

- What previous research or real world event led you to your problem identification?
- What does your research add to address the problem identified?
- Why is the addition made by your research important or interesting?
- How is the addition made?
- What is your problem statement or aims?
- What is the specific rationale for your research?

The purpose of the literature review is to provide a rationale for your research. This can be achieved by referring to previous research, real world changes e.g. new technology, processes, business models that have been identified as requiring new or innovative solutions, or how your research follows on from previous interventions or research. Many students provide a good review but do not work on their rationale. Frequently this is a forgotten part of the introduction. The rationale builds the argument for your research, explaining why your research is important, how it fits in with previous research, addresses a real-world problem and how it will be conducted.

Think of your literature review as a funnel, starting off broad, providing an introduction to the area, providing relevant theory, research, current approaches to the problem and narrowing down your focus to your proposed applied research.



The literature review starts with a **general introduction** to the area of interest. Make sure not to make it too general as this can make the introduction longer and thus affect the word count.

Next you want to review the **main theories, variables and research of interest.** These should be those that are most relevant to your research. Assume in your review that the reader is familiar with the general area of research. The reader's main interest is in what you have to contribute. They are interested in the previous literature only as it relates directly to your contribution. Make sure not to go off on tangents. It takes time to write the literature review and to decide what to include and what not to, so don't expect to get the key literature review perfect the first time. It will require redrafts. A good method to decide whether the research, theory or process is relevant is to ask whether the research you are discussing helps in explaining the rationale for the study. If 'No' then you should consider omitting it. A good review of the theories and research is one that is evaluative rather than just descriptive. Try to evaluate the research you review here. So when you describe a piece of research, also go on to evaluate the findings by mentioning other research which supports it with similar findings or which contradicts it.

Once you have told the reader what is already known, you must relate what still needs to be known, that is, what you intend to find out. Tell the reader not only what you intend to contribute, but also what the nature of the contribution is. Does your research resolve an issue that has been unresolved in the past? Does it deal with issues that others have not thought about? Does it attempt to correct an error in previous research? Does it use a novel approach to address the problem identified?

Next, show the reader that the contribution is a potentially interesting or important one. Why have people paid attention to this issue? Why is the new issue one that people should pay attention to? Does an error in previous research really undermine conclusions that previous investigators have

drawn? Has real world change provided an opportunity for new solutions to be developed or existing solutions to be improved? Remember, the purpose of the literature review is to interest the reader in your research; the reader will either be motivated to continue reading or just toss your Applied Research Project aside.

Finally, you should tell the reader how you intend to make your contribution. Sketch your research design, leaving a detailed description for your *design* section later in the report. Show how your design relates to the theoretical issues you address. It is important to convince the reader at this point that your research really does test the hypothesis you want to investigate.

Remember, you do not get marks for description – evaluate the literature, do not describe it. In addition, avoid repetition and redundancy. Furthermore, use the passive voice but avoid the use of personal pronouns (I, we, our, us, etc.).

Always think about the **rationale** for the research. The rationale explains why your research is important or interesting within the context of previous research and theory. When you have completed your literature review as yourself the following questions:

- ➢ Is it clear how the proposed research follows from previous research?
- ➢ Is the reason for conducting the research clear?
- ➢ Does the Literature review give an indication of how the research is to be conducted?

If your answer to any of these questions is 'No' then you need to alter your literature review to account for these.

At the end of your literature review you need to include your **hypotheses**, which are explicit statements about your research and a prediction of your findings. E.g. 'It was predicted that rugby fans would recall more players' names than football fans.' **Remember do not include details of the null hypotheses here.** In the context of qualitative research, no hypotheses are presented here, rather the central problem statements are offered. When conducting a mixed methods study, you need to present the hypotheses for the quantitative side, and problem statements for the qualitative side.

MAIN BODY

Typically, the body of a report is organized into a hierarchical structure, with numbered or unnumbered headings for sections, subsections, sub-subsections, and even smaller sections. You must work with your supervisor to ensure you select the appropriate headings for your project. Listed are just a few examples, Sample, Design, Data, Type Changes and Special Characters, Math Equations, Code Development, Tables, Figures and Theorem-like Constructs. You should include just enough information so that your research can be replicated. Too much information and you risk boring the reader, too little information, and your results will not be verifiable. It is better to err in the direction of including too much rather than too little. The use of schematics or flow diagrams can be helpful to illustrate the process.

When writing this section, you should use continuous prose rather than bullet points or note-form. Using bullet points or writing in note form creates a very disjointed Applied Research Project and should be avoided.

The section describing the method is usually divided into a number of subsections. The aim of the subsections is to simplify and clarify the presentation for the reader. The following information is provided to help guide this development but remember your sections will depend on your project type.

Participants/Data Source:

You should describe in this subsection:

- ➢ The type of sample being employed
- ➢ The total number of participants
- ➢ The number of participants receiving each treatment
- ➢ The population from which the participants were drawn
- ➢ How participants were selected
- ➢ The circumstances under which the participants participated (e.g., for pay, for course credit)
- ➢ Age range, mean age, standard deviation of age
- ➢ Gender split and the makeup of any groups in the sample
- ➢ The source of your Data if using existing secondary sources

In describing the participant population, include any details that might affect the outcome of the study – education, etc. The nature of the research will determine what other attributes might be relevant.

It is not enough to state that University students participated in the research. Explain how you recruited them, such as an online survey or as part of a Research methods class. It's not enough to say opportunity sample, you need to say how you were able to recruit this opportunity sample.

Design:

Design depends on the type of project. For example, in case of a data analytics project, this subsection should include a description of:

- ➢ The independent/predictor variable(s)
- ➢ The dependent/criterion variable(s)
- ➢ The various experimental and control groups
- ➢ The way in which participants were assigned to groups
- ➢ Remember to indicate which variables were between-subjects and which within-subjects
- ➢ The actual design (e.g. correlational, experimental, or quasi-experimental). Consult your notes from you research methods classes to decide the appropriate design
- ➢ If a mixed design is used (i.e. partly correlational, partly cross-sectional, for example) make sure to describe BOTH parts of the design, and clearly indicate the independent and dependent and/or the predictor and criterion variables for each part

Make sure you do not confuse the content for the design and the procedure. Use this list as a guide when you are writing.

Materials / Apparatus/Tools/Technologies

The above headings are acceptable to use however you should use the most relevant heading to your research. A list of all resources used should be listed here with in-text citations. It should link to the appendices where there should be a copy of everything, where possible. For example, information sheets, debrief sheets, interview questions, debrief sheets etc.

Materials: You should describe in this subsection the questionnaire (with reference) or stimulus material used in the research. Sufficient detail should be given so that the reader could identify the

questionnaire or generate the same or equivalent stimuli. If the stimuli are unconventional, you might produce examples in a table or figure.

When referring to the **questionnaires**, you need to provide a description of each of the measures you used. So, if you used the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the COPE Inventory (Carver, 1989), you need to provide a review of both scales separately. You need to include the following information to describe the questionnaire:

- What the measures assesses
- The number of items (questions) in the measure
- What sort of items there were (give examples of items here)
- The written instructions given to participants (provide a summary of these)
- How participants are expected to respond to items (response options e.g. whether they had to give each item a rating out of five)
- Range of possible scores and the meaning of the scores
- Listing any subscales for the measure
- Details on reliability (alpha) reported from previous research with in-text citation
- Details of the relevant forms of validity
- **Provide a copy of the full questionnaire booklet in the appendices (unless there are copyright issues in doing so)**.

When referring to **qualitative** elements or study, this should focus on providing

- Sample questions from the interview or focus group

This information changes in an experimental situation. Take a study on recall where a group of people are presented with a word list that they were required to remember. The words were presented one by one using an overhead projector. Here are the details that would be required for the materials section:

- How many words were in the list
- Were the words structured or categorised in any way
- Examples of the words and **provide a copy of the full list in the appendix**
- What is the rationale for selecting these words?
- If the words were used in a previous study give detail of the previous study (e.g. Authors if the study and year of publication)

You would also need to state how the words were prepared in advance of the presentation. So you would say that the words were copied onto overhead projector acetates for presentation to participants. If the word were present via a computer, you would need to state that here but also list the computer in the Apparatus section.

Apparatus: The apparatus used in the research should be described in this subsection. Present a general description of the apparatus, including any details that might affect the outcome of the research. If the apparatus is a standard piece of manufactured equipment, the name, and model number will substitute for most details, because the reader can then learn details from the manufacturer. If the apparatus is unusual, you might want to photograph it and present it as a figure. **This entire subsection can be omitted if no apparatus is used**.

Procedure:

This is a description of the study and should give an account of what the participants did during the study from the moment they walked in or began the process of being involved in your study, to the moment they walked out or finished. A chronological account is usually best. Include a brief overview of any verbal or written instructions given to them and provide a copy of any **written instructions in the appendices.**

You should also indicate what the participants were told as to the purpose of the study e.g. were they told that it was a memory study or were they simply told that it was a study investigating how they processed words.

Provide as much detail as possible such as timings for each stage of the study if relevant and the length of time it took each participant to complete it. Write clearly and concisely and avoid repetition. Provide details also on debriefing, whether you used information sheets and consent forms and provide a copy of these in the appendices.

Ethics

Please include all information on any **ethical considerations**, such as anonymity, right to withdraw, informed consent etc. This section should demonstrate ethical awareness in the context of the study.

Data analysis

For a qualitative study, a data analysis section is required, however it is optional in the case of a quantitative study. This should indicate the form of analysis, e.g. thematic analysis. It also should discuss each of the decisions prior to conducting thematic analysis as per Braun and Clarke (See Applied Research Project Moodle page) and indicate what decision is taken in each case for the current study. If provided for quantitative, it outlines the descriptive statistics and the inferential tests chosen to analyse the data.

Math Equations:

You may want to display math equations in three distinct styles: inline, numbered or non-numbered display.

Results/Findings/Outcome:

The section should open with an outline of the content within this chapter, providing the reader with an overview of the section.

For quantitative projects the results chapter should include:

a. **Descriptive statistics,** which summarise the data in a readily comprehensible form. Should also include reliability statistics.
b. **Inferential statistics** that test the likelihood that the obtained results were not due to chance. If you plan to present a large number of results, divide this section into subsections. The particular subsections used will depend on the nature of the study.

For qualitative project the results chapter should include:

a. A section on how the data was coded according to Braun and Clarke's six steps
b. The transition from codes to themes
c. present each theme.
d. possible models of the data.

Mixed methods projects will have a combination of these sections in the results section.

Descriptive Statistics

Similarly, start this section with a brief line or two on the information in this section. This section usually consists of tables of means and standard deviations and provides an interpretation of these

statistics by means of explaining them in words. The descriptive statistics can be presented in tables or graphs charts, whichever is most relevant to the variable you are describing but you still need to provide a description in words of the table or graph. Make sure to refer back to the table in your description e.g. See Table 1 for descriptive statistics for each of the psychological measures. Should introduce a table, present it and then discuss it.

When presenting a table stick to the following rules:

- ➢ They should be clear – avoid cluttering the tables
- ➢ They should have an informative table title at the top of the table
    - o They should be numbered, and this should be clearly indicated in the title
    - o The title should tell the reader what the table contains
- ➢ They should be concise – avoid repetition where possible
- ➢ Means and standard deviations should be reported to two decimal places
- ➢ DO NOT copy your tables straight from SPSS (See Applied Research Project Moodle page for link to download SPSS). These are not in the appropriate format and you will be penalised for using them.

When using tables ask yourself:

- ➢ Is the table necessary?
- ➢ Is each table numbered based on the order in which each table is mentioned in the Applied Research Project?
- ➢ Is the table referred to in the text?
- ➢ Are all the tables presented in the appropriate format and consistent?
- ➢ Is the title brief but explanatory?
- ➢ Does every column have a column heading?
- ➢ Are any abbreviations or symbols appearing within each table explained by a note underneath it?
- ➢ Have you checked every number in the tables and its corresponding write-up for accuracy?

Sample table

Table developed by the writer / author: **Harvard format.**

Table 1.1 Descriptive Statistics of Psychological Measures

Variable	*Mean*	*Standard Deviation*
Perceived Stress Scale	*25.54*	*1.72*

Locus of Control	*52.68*	*2.87*
Self-Esteem	*44.60*	*2.13*

Formatting tables

- Tables are numbered consecutively in the order in which they are first mentioned in the text and are identified by the word Table and its Arabic numeral flush left at the top of the table.
- The tables can be double-spaced or single-spaced but be consistent across all tables.
- Begin the table title flush left, capitalising the initial letters of the principal words and in bold, the title non bold should be indented to the right as in the above sample.
- The table should have titles of the columns in bold format. two lines at the top and one line at the bottom, and both sides to outline it (1.5 pt) and lines within the table (1 pt). Use the Insert Table function to create a table and the Design and Layout tabs to format the table (available when a table is created).

Formatting of figures/graphs

Similar rules apply when including graphs.

Graphs can be created in SPSS or excel and copied straight in.

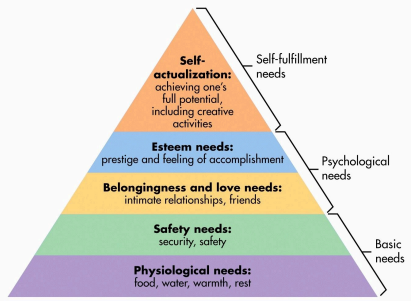
Remember to describe the graph in text form as well and refer back to the graph.

Provide a title for the graph and **the title /caption should be above the graph.**

Graphs should be numbered e.g. Figure 1.

Example Figure 10 .1

Maslow's Hierarchy of Needs



Source taken from McLeod, S., 2007. Maslow's hierarchy of needs. Simply psychology, 1, pp.1-8.

Inferential Statistics

As in the previous sections, you must report the right amount of information, making sure not to under report or over report your results. If you are unsure as to whether to report a result, it is usually better to report it. It is useful to include an introduction to the inferential section (See

Applied Research Project Moodle page for advice on quantitative inferential statistical analysis and link to download SPSS).

The format to follow is:

(a) Report all data that are directly relevant to your hypotheses

(b) Other data that may be peripheral to your hypotheses but that are of particular interest in their own right.

The order in which you report your results is very important. Authors often report first those results that are of most interest or relevance to the hypotheses being tested. Less interesting or relevant results are reported later. You may wish to report first a general conclusion or interpretation, followed by some descriptive statistics that support your assertion, followed only at the end by inferential statistics that buttress the conclusion.

It is often convenient to summarise your data in the form of a figure(s) or table(s). In planning tables and figures, keep in mind that tables and figures should be largely self-explanatory, but you should discuss them in the text, picking out some results from the tables to discuss but do not repeat everything in text that is contained in the table. Remember, large numbers of tables and/or figures are discouraged, and one or two sentences can often summarize data that initially seem to require a table or figure.

In deciding between presentation of data in a table versus a figure, you face a trade-off. Figures tend to give the reader a better overall sense of the data; tables convey information to the reader more precisely. In general, tables are preferred, but your own judgment of what best conveys your message should be the arbiter of how the data are presented.

Centre column heads and subheads over the appropriate columns within the table, capitalizing only the initial letter of the first word of each heading (do not capitalize the second part of a hyphenated word unless it is a proper noun).

Figures are also numbered consecutively in the order in which they are first mentioned in the text. Use the word *Figure* and an Arabic numeral. Each figure must have a title that includes the figure number.

In reporting tests of statistical significance, include:

(a) the name of the test,
(b) the variable used and groups involved if relevant
(c) the value of the test statistic,
(d) the degrees of freedom (if appropriate),
(e) the significance value of the test (p = .023) or if you do not have the exact value of the significance value report present it in the following formats depending on which one is appropriate: p > .05, or p < .05, or p < .01, p < .001
(f) The direction of the test (if appropriate).

Assume that your reader has knowledge of basic statistics. There is no need to justify the type of test used nor is there a need to explain to the reader what the results would be like if the null hypothesis was rejected.

Remember to consult your notes for your research and analysis modules for the appropriate write-up for each test as the content may vary depending on the test.

Note: Although it may be tempting to include raw data in your Results section, you should refrain from doing so. Incidentally, **there is no need to include raw data anywhere in your Applied Research Project, including the Appendices.**

Some Examples of Tables for Inferential Statistics

Here are some examples of tables in the appropriate APA format, however depending on the statistical test that you conduct the content of your table will vary. In some tests you would be required to report more than what is contained in the tables below. Please consult your research and analysis notes for the appropriate content and write-ups for each test.

Table 1: *An Independent Samples T-test table displaying the differences between the Words and Images groups for the various variables.*

Variables	**Groups**	**Mean**	**SD**	***t***	***df***	***p***
Response Accuracy	Words	xxxx	xxxx	xxxx	xxxx	xxxx
	Images	xxxx	xxxx			
Accuracy- Males	Words	xxxx	xxxx	xxxx	xxxx	xxxx
	Images	xxxx	xxxx			

Accuracy- Females	Words	xxxx	xxxx	xxxx	xxxx	xxxx
	Images	xxxx	xxxx			

Table 2: *Correlation table*

Variable	Variable name	Variable name	Variable name	Variable name	Variable name	Variable name
Variable name						
Variable name	Correlation value					
Variable name	Correlation value	Correlation value				
Variable name	Correlation value	Correlation value	Correlation value			
Variable name	Correlation value	Correlation value	Correlation value	Correlation value		
Variable name	Correlation value	Correlation value	Correlation value	Correlation value	Correlation value	

Layout the table similarly to that of the spss table – headings along the top and along the side.

Only insert the Pearson value in the table – don't enter any other values. Place the relevant * beside the appropriate ones based on what is in the original SPSS table.

Remember the information is replicated in the Pearson table (in a diagonal manner – look for the line of ones as the split) so only put in one side of it.

Table 3: *ANOVA table*

Variables	**Groups**	**Mean**	**SD**	***F***	***dfs***	***p***

Qualitative analysis

Thematic analysis is the most common form of qualitative analysis when dealing with interviews, focus groups and qualitative surveys.

Remember that you should use the Braun and Clarke (2006) article as a guide (See Moodle page for article and qualitative analysis advice along with a link to download Nvivo) to conduct your thematic analysis.

When reporting on your results, the section should tell a story from how you coded to the data to the themes being reported with supporting data extracts.

a. A section with a brief overview of how the data were processed and coded – mention the six steps to conduct thematic analysis with reference to Braun and Clarke.
b. Outline how the codes developed into themes.
c. Present each theme, summarise each theme providing a definition of the theme and provide distinct examples (quotations) from the data to highlight the theme.
d. Present a model to demonstrate the hierarchy of coding and themes present along with any relationships present. This model should be discussed in text.

CONCLUSIONS AND FUTURE WORK

This section is your interpretation of the findings from your analyses and how it fits with previous research and theories. The focus of this section is the explanation and interpretation of your findings. As you complete each paragraph you should read over it and if it does not relate in some way to your findings then it is not appropriate for your discussion. This section is to highlight the relevance of your findings.

The Discussion should contain these **key elements**:

- ➢ Restate the aim of the research
- ➢ A brief summary of your findings
- ➢ A statement concerning support or otherwise of your hypotheses (problem statement)
- ➢ A discussion of your findings in relation to previous theory and research – do your findings support previous research or are they contrary to previous studies?

  AND/OR

  Discussion of the outcomes of the artefact, implications and applications of the artefact or/and findings in the real world context (business, research application etc.)
- ➢ Discussion of potential problems in the study

- ➢ Strengths and weakness of your research (from both a methodological and practical applied perspective)
- ➢ Ideas for future research stemming from your findings
- ➢ Implications of the results and applications of your research
- ➢ Concluding section restating your main findings and any important points that you raised in your discussion.

You should open the Discussion by reintroducing the reader to the **aim** of your research. This is followed by a **general description of your results** and how well your results/solution fit your hypotheses (problem statement) and the literature. When you are summarising your findings or concluding your solution to the problem you are not repeating what was in the results section and you do not report the statistics. It should be a summary of the findings that you report and whether or not your findings/outcome **support your hypotheses**.

Following this you **discuss your outcome in terms of previous theory and research** that you mentioned in the Introduction. Be careful here, many students provide a good discussion of the theory and research but forget to link it back to their research outcome. Also, it is not enough to state that the research outcome/proposed solution support a piece of previous study, you need to state why they support it or if it does not you need to state why. What implications do your findings/research outcomes have for previous theories and research? What is different about your study which means it is inconsistent with previous work? Go beyond description and be evaluative. If your findings suggest that there could be a problem with previous research discuss this or if other work suggests problems in your study or future research in the area discuss the pros and cons of this.

Furthermore, you should discuss **weaknesses** of your research, and theoretical and possible practical implications of the results. If you have drawn conclusions different from your hypotheses, you might suggest ways in which these conclusions could be verified in future research. Do not merely say, however, that future research is required, without giving the reader any idea of what form this research might take. Every reader knows that more research can be done on any topic. What the reader wants to know from you is what direction this future research might take.

When you mention the weaknesses or possible design flaws in the study, think about the implications of these flaws and would a particular flaw really have an impact on your findings/outcomes e.g. a gender imbalance. A gender imbalance is a common comment in theses,

and may be valid, but you must then explain how having more females than males (or vice versa) may have affected your findings. Why is it that you expect females to respond differently to males in this task or on a particular measure? What evidence or research is there to state that they do respond differently? Therefore, think through these design flaws and their implications before you include them. Do not let design problems or other weaknesses take over the Discussion as it should be a discussion of your findings.

Make sure to highlight the **strengths** of the research as you have designed and conducted a piece of research which will have strengths so make sure to highlight these strengths.

Next mentioned possible avenues for **future research**, new variables that would work better, different samples, age groups? **Don't pick ideas for future research from thin air**. The suggestions for future research should stem from your findings/research outcome and add to the literature for your area of interest. Remember to provide some rationale for this suggestion, why it is important and how it stems from the current research. Also, discuss any **applications or implications** of your research. Does it have any real-life implications or applications?
The final section of your Discussion should always be a short **concluding paragraph** which restates the main findings of your research and any important points that stemmed from your discussion. Don't sensationalise the final paragraph or write any personal opinions based on your research just conclude the section based on the content mentioned here.

Problem – what if my findings do not fit the hypotheses?

If the data fit the hypotheses, your task is straightforward. If the data do not fit the hypotheses, then you can approach the data from either of two angles. One angle is an acceptance of the data as un-interpretable; the other angle is an interpretation of the data as fitting hypotheses different from those that you originally suggested/implicitly implied.

If your data are un-interpretable or only partially interpretable, say so. Complicated explanations of unexpected data are easily recognized as rationalisations of failure. If you have reason to believe that some aspect of your study was responsible for un-interpretable results, say so briefly and let matters stand there. Do not waste space listing reasons for the un-interpretable results. Such lists are very boring.

If your data are unexpected but un-interpretable, it is permissible to interpret them in light of new, reformulated hypotheses. You must make clear however, that your explanation is *post hoc* and speculative. There is a fine line between reformulation of hypotheses and empty rationalization, so you must convince your reader that your *post hoc* explanation provides a compelling account of the data.

After you have discussed the fit of your data to the original hypotheses, and any new hypotheses you might have, you should discuss the findings in terms of the literature. This is an extremely important aspect of the discussion as it demonstrates your understanding of your own research.

Following this, continue the Discussion in the same manner as mentioned above.

Remember to include a concluding section – do not end the section suddenly.

REFERENCES

Start the reference list on a new page in Harvard Referencing Style (https://libguides.dbs.ie/ld.php?content_id=28873193). The reference section provides a complete list of the sources you cite in your Applied Research Project. The reference list should be in alphabetical order in terms of the first author.

Remember, to cite secondary sources, refer to both sources in the text, but include in the references section only the source that you actually used. For instance, suppose you read Feist (1998) and would like to paraphrase the following sentence within that book: Bandura (1989) defined self-efficacy as “people’s beliefs about their capabilities to exercise control over events that affect their lives” (p. 1175). In this case, your in-text citation would be “(Bandura, cited in Feist, 1998).” Feist (1998) would be fully referenced within the list of references. Bandura would not be listed. For more information on citing secondary sources, see this library link on Harvard Referencing Style – https://libguides.dbs.ie/ld.php?content_id=28873193

What is referencing and why is it necessary?

Referencing is a standard method of acknowledging the sources of information you have consulted. Anything – words, figures, graphs, theories, ideas, facts – originating from another source and used in your assignment must be referenced (i.e. acknowledged)

- To avoid plagiarism
- So that the reader can verify quotations

What is plagiarism?

Plagiarism is defined by the College as the act of presenting the work, written or otherwise, of any other person, including another learner or institution, as your own. The only way to use another person's work without committing plagiarism is to fully and precisely reference the original author(s) in your own work. Please read the Academic Integrity Policy (QAH B.3.3) regarding academic impropriety: https://students.dbs.ie/quality-assurance/qah#Conduct

Be sure to check the Harvard Referencing guide on the Library website, https://libguides.dbs.ie/ld.php?content_id=28873193 , and the other useful guides to referencing also. **If you feel you require any further support with referencing and essay writing, you can attend a Library class to assist you in writing and referencing correctly. Please check out the Library website http://library.dbs.ie/ for more detail.**

APPENDICES

In your appendices you need to include the following:

- Copies of questionnaires if used (and if not breaking any copyright laws)
- Copy of information sheets if used
- Blank copy of consent forms if used
- Copies of contact details for support services if relevant

DO NOT include SPSS output in the Appendices.

Make sure to label each appendix clearly and refer to each one within the relevant section (e.g. refer to the questionnaire in the Materials section of the Method).

Applying the finishing touches

The Cover page

The cover page should be in the following format please use the appropriate course and programme leader for you:

Applied Research Project Title Goes Here And Is Centred On The Page
Student Name Centred
Applied Research Project submitted in partial fulfilment of the requirements for the degree of [enter programme name here] at Dublin Business School
Supervisor: Name included here
Month Year

Declaration page
This page should be a declaration that the completed work in the Applied Research Project was completed by you.

'I declare that this Applied Research Project that I have submitted to Dublin Business School for the award of [name your programme here] is the result of my own investigations, except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any other degree.'

Signed: TYPE NAME
Student Number: 1234567
Date:

The Acknowledgments page

Acknowledgements should not be extensive, should be in proportion to the assistance received, and should be generous in relation to help received from outside the College, e.g., clinics, schools, or libraries.

Page numbering

Pages should be numbered consecutively, except the cover page. Number all pages in Arabic numerals in the upper-right hand corner (Arabic numerals are our traditional numbers 1, 2, 3 etc..). The number should appear at least 1 inch from the right-hand edge of the page, in the space between the top edge of the paper and the first line of text. If a page must be inserted or removed after numbering is completed, renumber the pages; do not number inserted pages with, for example, 6a or make other repairs. There is no requirement for headers or footers. Ensure that the page numbers on the contents page tally with the numbers on the pages that they are referring to.

Numbering of tables and figures

Tables are numbered consecutively in the order in which they are first mentioned in the text and are identified by the word Table and its Arabic numeral flush left at the top of the table. Can be double-spaced or single-spaced but be consistent and begin the table title flush left, capitalizing the initial letters of the principal words, and italicizing the title. If the title is longer than one line, double-space between lines, and begin subsequent lines flush left under the first line.

Centre column heads and subheads over the appropriate columns within the table, capitalizing only the initial letter of the first word of each heading (do not capitalize the second part of a hyphenated word unless it is a proper noun).

Figures are also numbered consecutively in the order in which they are first mentioned in the text. Use the word *Figure* and an Arabic numeral. Each figure must have a title that includes the figure number.

Remember that the title of a table appears over the table, and the title of a figure appears under the figure.

Paragraphs and Indentation

Indent the first line of every paragraph. For consistency, use the tab key, which should be set at five to seven spaces or ½ in. Type the remaining lines of the Applied Research Project to a uniform left-hand margin. The only exceptions to these requirements are the abstract, titles and headings, table titles, and figure captions (titles).

Margins

Leave uniform margins of at least 1 in. (2.54 cm) at the top, bottom, left, and right of every page. In most word-processing programs, 1 in. is the default setting for margins.

Uppercase and Lowercase Letters

Type the following parts of your Applied Research Project in uppercase and lowercase (capitalize the first letter of important words): Most headings; Table titles; some elements of the reference list (see examples above).

Headings

Your Applied Research Project should use from one to five levels of headings. For most pieces of work, three or four levels of heading are sufficient.

Three levels:

Centred Uppercase and Lowercase Heading

Flush Left, Italicized, Uppercase and Lowercase Side Heading

Indented, italicized, lowercase paragraph heading ending with a period.

Four levels:

Centred Uppercase and Lowercase Heading

Centred, Italicized, Uppercase, and Lowercase Heading

Flush Left, Italicized, Uppercase and Lowercase Side Heading

Indented, italicized, lowercase paragraph heading ending with a period.

Spacing and punctuation

Space once after all punctuation. *Exception*: Do not space after internal periods in abbreviations (e.g., U.S.A.) or around colons in ratios.

The font should be size 12, and either Times New Roman or Calibri font can be used, with double spaced lines; single spacing can be used with indented quotes and in tables.

Part III: Applied Research Project and Poster Marking Sheets plus Information and Consent Forms

Applied Research Project Marking Scheme

Artefact and Presentation Marking Schemes

Student Name		
Student Number		
Programme		
Submission Month/Year		
Supervisor Mark		Supervisor Name:
Second Marker Mark		Second Marker Name:
Agreed Mark		

	Marking	First Marker Mark	Second Marker Mark	Agreed Mark
Oral Presentation	out of 100			
Artefact	out of 100			
Applied Research Project	out of 100			

Artefact

Analysis, design and implementation of the artefact. Usefulness and completeness of the artefact. Links artefact clearly and concisely to primary research and/or the research question. Justifies the selection of artefact in relation to overall Applied Research Project.	**/ 100**

Comments:

Applied Project Report

Title & Abstract:

- 12-15 words for title
- 150 words or less
- Must communicate aims, design, *relevant* method and results (should not include detailed description of procedure)
- Should not include statistics
- Should include all variables mentioned

- **PROBLEM STATEMENT**

CONTEXT/IDENTIFICATION OF PROBLEM

- **Are hypotheses/research questions clearly stated?**
- **Are they justified in relation to the literature discussed?**
- **Is the original contribution of the project in relation to previous investigations made clear?**
- **Is it clear at each step of the introduction how the research discussed pertains to the project?**

KEY LITERATURE REVIEW: Previous Research in terms of the current study

- **Is it well structured, beginning broadly with overall aims in the introduction at the start (while highlighting the areas to be covered in the literature review), and concluding with specific hypotheses/research questions at the end?**
- **Are terms defined appropriately?**
- **Is the research discussed relevant to the project, and discussed in appropriate detail (e.g. methodological difficulties etc. discussed)?**
- **Is critical evaluation of previous research evident?**

- **Method/Research Approach: Participants, Design**

- Number of participants and relevant demographic info for Participants
- Is the sampling technique described and correctly identified?
- Is design named correctly, e.g. correlational, experimental, cross-sectional, qualitative?
- If qualitative and quantitative designs are used, are both aspects clearly defined?
- Are the variables correctly identified for each aspect?
-

Method/Research Approach: Materials, Procedure, Ethics

- Are questionnaires described in appropriate detail, and properly referenced?
- Is scoring adequately described (e.g. totalled items, average items, subscale scores, etc used)?
- Is reliability discussed?
- Procedure is not described with either too much or too little detail
- Detailed content on the ethical process taken, demonstrating ethical awareness
- For qualitative, a data analysis section should also be included

Discussion/Summary: Interpretation in terms of empirical evidence

- Findings should be outlined accurately, with hypotheses described as retained or rejected accordingly
- Findings should be interpreted in light of the literature discussed in the introduction

Discussion/Summary: Limitations/future research/ conclusions

- Limitations of the research should be described in detail
- Strengths as well as weaknesses should be discussed

- Implication of findings and possible application should be discussed - Concluding paragraph included which includes key findings and their relevance - **References:** In Harvard Style? References listed in text appear in this section and vice versa? References in alphabetical order? Enough up-to-date references used? Text in introduction/ literature review with no cited references?
Comments:

Information Form and Consent Sheet

INFORMATION SHEET FOR PARTICIPANTS

PROJECT TITLE [Project title goes here]

You are being asked to take part in a research study on…

[Describe the general research background topic and aim(s), say who you are, and who is supervising the research, give the DBS affiliation and, once obtained if required by DBS, that the project has been approved by the Research Ethics Committee]

WHAT WILL HAPPEN

In this study, you will be asked to…

(To the extent that it is possible, and in light of your research aims and subject to ethical approval, provide an explanation of the procedures. This explanation must be sufficiently detailed to ensure that participants can provide informed consent. If you cannot fully inform participants (again, subject to ethical approval), you must provide a complete debriefing to participants at the earliest point possible following their participation]

TIME COMMITMENT

The study typically takes...

(Let participants know how long there participation is expected to last and, if applicable, the number of sessions)

PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time without explanation required from you. You have the right to ask that any data you have supplied to that point be withdrawn / destroyed. You have the right to omit or refuse to answer or respond to any question that is asked of you. You have the right to have your questions about the procedures answered (unless answering these questions would interfere with the study's outcome. A full de-briefing will be given after the study). If you have any questions as a result of reading this information sheet, you should ask the researcher before the study begins.

CONFIDENTIALITY/ANONYMITY

The data I collect does not contain any personal information about you except… [describe as appropriate. Describe your intentions regarding use of the data, for use in your Applied Research Project and e.g., presentation at conferences, publication, etc. In doing so, make clear the extent to which individual participants will or will not be identifiable, as appropriate]

FOR FURTHER INFORMATION

I or / and [Supervisor name] will be glad to answer your questions about this study at any time. You may contact my supervisor at …. (provide email and DBS phone].

INFORMED CONSENT FORM

PROJECT TITLE:

PROJECT SUMMARY:

By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

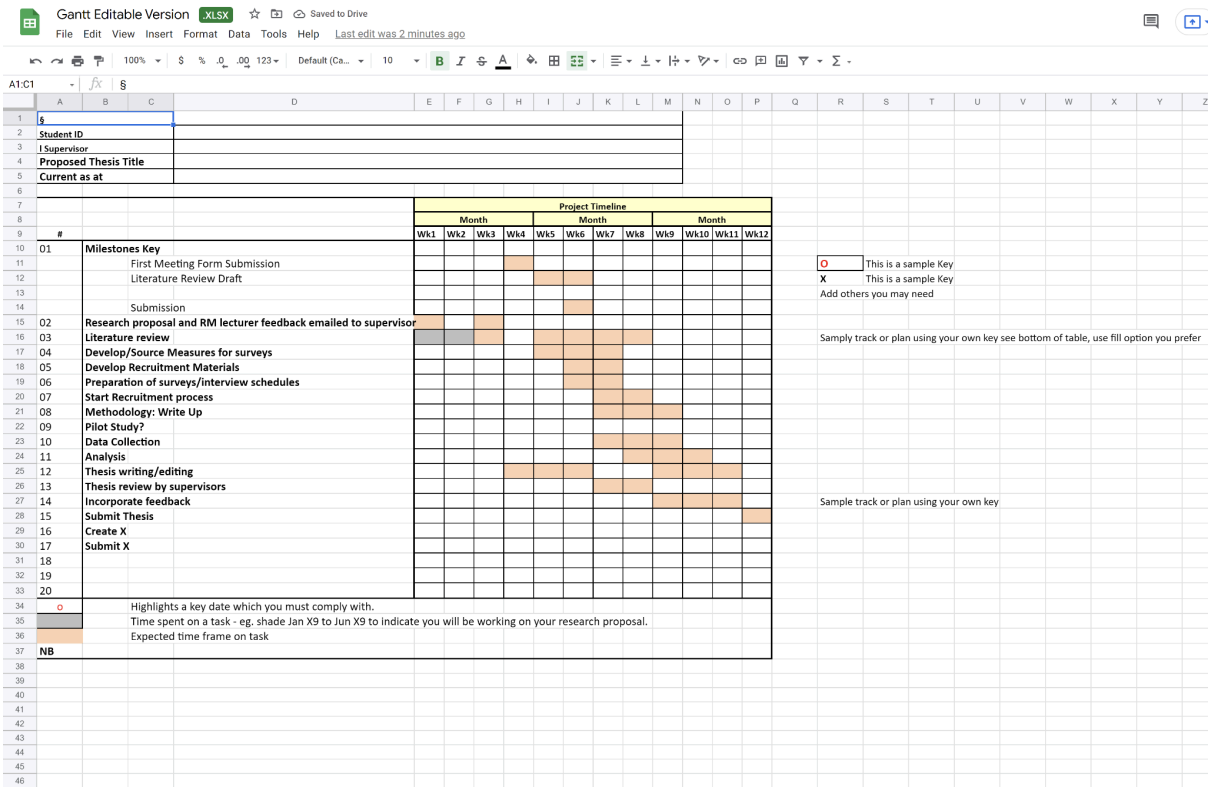
_____	_____
Participant's signature	Participant's Name (Printed)
_____	_____
Student Name (Printed)	Student Name signature

_____

Date

SAMPLE GANTT CHART

An editable version of this can be found on your Moodle page.



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10	01	**Milestones Key**																								
11				First Meeting Form Submission														O	This is a sample Key							
12				Literature Review Draft														X	This is a sample Key							
13																		Add others you may need								
14				Submission																						
15	02	**Research proposal and RM lecturer feedback emailed to supervisor**																								
16	03	**Literature review**																Samply track or plan using your own key see bottom of table, use fill option you prefer								
17	04	**Develop/Source Measures for surveys**																								
18	05	**Develop Recruitment Materials**																								
19	06	**Preparation of surveys/interview schedules**																								
20	07	**Start Recruitment process**																								
21	08	**Methodology: Write Up**																								
22	09	**Pilot Study?**																								
23	10	**Data Collection**																								
24	11	**Analysis**																								
25	12	**Thesis writing/editing**																								
26	13	**Thesis review by supervisors**																								
27	14	**Incorporate feedback**																Sample track or plan using your own key								
28	15	**Submit Thesis**																								
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30	17	**Submit X**																								
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34	o			Highlights a key date which you must comply with.																						
35				Time spent on a task - eg. shade Jan X9 to Jun X9 to indicate you will be working on your research proposal.																						
36				Expected time frame on task																						
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