32144 Technology Research Preparation

Assessment Task 3: Research Proposal (Group)

Intent and Objectives

To establish search skills and the ability to evaluate the appropriateness of the articles chosen. To develop the skills of critical analysis and synthesis, direct and indirect citation, referencing, and the writing of a complete report.
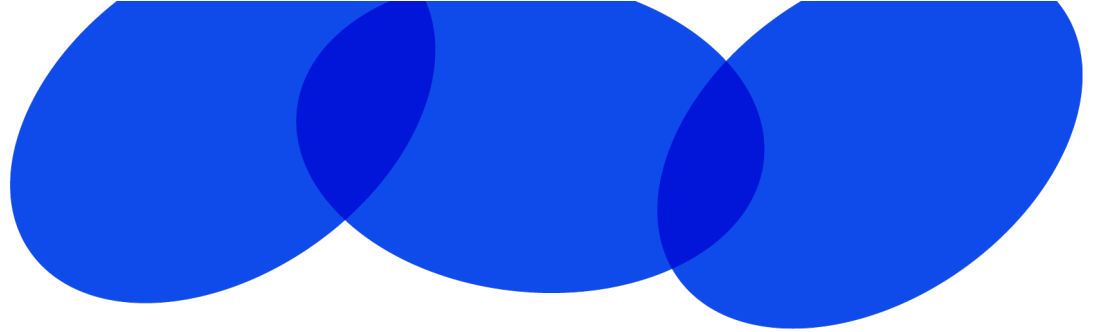
- Addresses the following Subject Learning Objectives (SLOs): *1, 2, 3 and 4*
- Contributes to developing Course Intended Learning Outcomes (CILOs): *A.1, B.1, C.1 and E.1.*

Task Description

The purpose of the Project Proposal is to develop students' ability to identify a significant research problem applicable to the industry context, to add depth to their knowledge and understanding of a field in which they are interested, and to design a method for addressing the question. The Project Proposal is expected to show students engaging in genuine enquiry and investigating something worthwhile. It links your proposed work with existing knowledge, ideas, facts, technologies, and solutions relevant to the topic. It should lay the way (being suitable and executable) for the Research Project in the later semester, which is compulsory or optional depending on your degree.

The Project Proposal should be in the form of an industry report and contain the following elements:

- *Cover Page: Identify the topic, students' names, and student ID*s, as well as their institution and degree.

- *Table of Contents—Provide a table listing sections of the Proposal in a hierarchy* of titles and subtitles, with page references.

- *Executive Summary* - Provide a concise summary of the main points of your Proposal

- *Introduction* - The Introduction should introduce your research problem clearly and provide the necessary context; state the aim of the research; establish your point of view or position on the research problem; communicate the importance of the research study for

The industry generally and for a particular organisation; concisely state your main findings; and briefly give the reader an overview of how the report is organised.

- *Research Aims and Objectives—Describe clear and straightforward research aims and objectives in language appropriate to the industry, stating what you intend to achieve through your proposed research project. Remember to focus on your research aims and try to narrow your topic* to something that will be achievable.

- *Background* - Write a Background to the research problem, summarising and adding to the Literature-Based Report (Assessment 2) prepared earlier if necessary. The purpose of the Background is to provide a rationale/justification for the research proposed. You will critically synthesise and evaluate existing knowledge and relevant facts concerning high-quality information sources, such as reports from government, NGOs, industry or market research companies, ICT industry or business magazines and journals, white papers, books and book chapters. You may also include academic journal articles and conference papers. Cite sources of information using the UTS APA referencing style.

- *Research Significance and Innovation*

  - Firstly, explain the *significance* of the research and the importance of the problem, with justification from the Background. Identify how the research will improve ICT knowledge, technical capability and practice.

  - Secondly, highlight the *benefits to society or industry* from your proposal research. From a social or business perspective, why is it important to solve your identified problem?

  - Thirdly, describe the *innovation* of your proposed research project. *How is it new*? How will it contribute in some novel way to a company's operations or ICT knowledge generally? Will it improve existing technologies or approaches? Justify your claims concerning the Background.

- *Research Methods - Describe the research method(s) appropriate to investigate your topic and*

- *highlight* the research problem. Justify your choices about your research problem:

  - Define the activities you will undertake.
  - Is your research design fixed or flexible?
  - Are your research techniques going to yield qualitative or quantitative data?
  - What overall approach would you use to carry out your project (e.g., case study, field study, design research, field experiment, laboratory experiment, action research)?
  - What techniques would you use (e.g., survey, interviews, focus groups, performance measurements, website hits, log analysis)?
  - How will you measure progress and what constitutes success, i.e., *how will you know when you have achieved the research objectives*?

- *Conclusion* - Write a logical conclusion to what has previously been presented in the Proposal. It must pull together and discuss all parts of your argument and refer the reader back to the research problem you have outlined in your Introduction and to the research problem.

- *Reference List—Include an alphabetical list of references in the correct UTS APA referencing style for* all sources cited in the Project Proposal.

Task Scenario

This assessment is based on the following scenario:

- Your team collaborates on ideas and topics for these research projects and contracts. Once an idea or topic has been decided, your team develops the project's overall scope and high-level concept.

- You then collectively divide the project into sub-projects, and each researcher will develop a research proposal for each sub-project.

- It is essential to ensure that there are some reasons why your research proposals together are significant. For example, their collective significance could be based on the *similarity* or *diversity* in the project topics, objectives, industries, stakeholders, and impacts.

- Example topic: "Cybersecurity for working from home"

  o 1st sub-project could be on network security for working from home – e.g., firewall configurations, using the office VPN, Wi-Fi routers, etc.

  o 2nd sub-project could be system security for working at home - e.g., intranet VPN, locked down operating system, intranet connections, monitoring, anti-virus, software licensing, etc.

  o 3rd sub-project could be on the work policy for working at home - e.g., group policy, working procedures, privacy & confidentiality rules, working hours, remote helpdesk support, etc.

  o Your group report will be about your overall project, and the introduction should describe the general topic/scenario.

  o If you are working individually, then you will develop a complete proposal for your sub-project
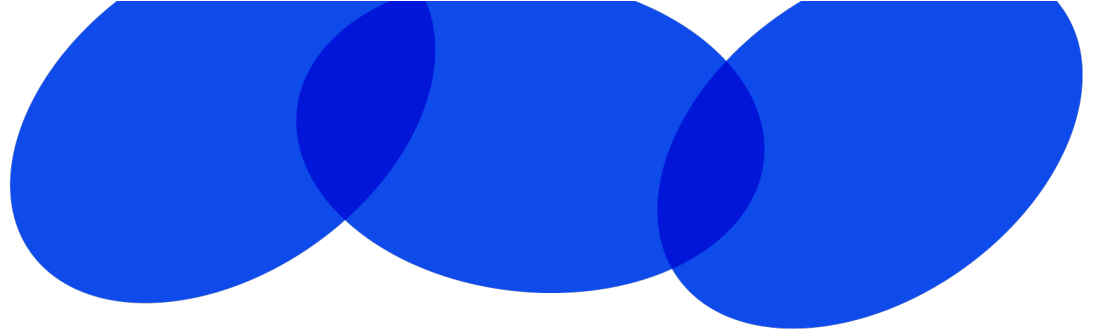
Groupwork

- Your research proposal may be developed, written and submitted as a group report **in groups of up to 4 students**. You are encouraged to collaborate on the overall topic, share resources (including references, software, and data), peer review, and paraphrase your team's general idea or topic in the introduction and summary of your research proposal.

- The supervisor is not required.

- All reports will be submitted to the Turnitin plagiarism detection system.

Assessment 3 - Project Proposal: Marking Criteria

Assessment Task 3 weighs 35%. There are seven main components to the Task 3 marking criteria:

1) Structure, including Cover Page, Table of Contents, Executive Summary, & Reference list in APA format (15 pts)

2) Introduction (10 pts)

3) Research Aims and Objectives (10 pts)

4) Background (15 pts)

5) Research Significance and Innovation (15 pts)

6) Research Methods (20 pts)

7) Conclusion (15 pts)

Marking Criteria - 70 pts (35%)	

Structure:
 10 points
	• Project Proposal as per the specification including:
	     o Cover Page (including project title, author details, tutor name)
	     o Table of Contents - Includes details specified
	     o Executive Summary - Succinct and complete summary with reasonable recommendations that follow clearly from the Proposal
	     o Body of report – (*see below: introduction, aims, background, significance, methods, conclusion*)
	     o Reference List in APA format

Introduction: **10 points**	• Clear statement of research problem, context of research, aims, and authors' point of view • Clearly communicates the importance and relevance of the research study • Briefly states the main findings of the report • Gives a brief overview of the organization of the report
Research Aims and Objectives: **10 points**	• Understandable and *realistic* aims and objectives • Clarity of research problem and feasibility for research project
Background: **10 points**	• Coherent and critical synthesis of existing knowledge of the topic • Relevance of background discussion to research problem
Research Significance and Innovation: **10 points**	• Clear statement of significance of research • Clear statement of who benefits from research • Clear statement of how the research is innovative or new • Justification of the significance and innovation of the research by reference to the Background and a convincing argument as to why this problem needs researching
Research Methods: **10 points**	• Clarity of description of selected research methods, backed up by appropriate sources • Demonstrated link between research methods chosen and the research problem and objectives
Conclusion: **10 points**	• Logical summary of Project Proposal • A convincing conclusion to the importance of the research problem and the effectiveness of your proposed approach to researching and solving it

Assignment 3: Marking Rubric

Criteria	Beginning (0-5)	Developing (6-8)	Proficient (9-11)	Mastery (12-15)
Structure	Missing sections or poorly presented proposal. Poor grammar and spelling. Summary incomplete or incoherent. Incomplete or missing reference list.	Report mostly complete with all required sections. Minor grammar or spelling mistakes. Summary succinct and mostly complete. Might be missing recommendations from the proposal. Referenced in APA format and with reference list in the appendix, but minor omissions or non-cited references present.	Complete report with all required sections. Good grammar and spelling with minor mistakes. Summary succinct and complete with some recommendations from proposal. Referenced in APA format and with complete reference list in the appendix.	Complete and professionally presented report with all required sections. Excellent grammar, spelling, and layout Summary succinct and complete with logical recommendations from proposal. Referenced in APA format and with complete reference list in the appendix.

Criteria	Beginning (0-3)	Developing (4-6)	Proficient (7-8)	Mastery (9-10)
Introduction	Vague or unclear statement of the research problem. Vague or missing aim of research statement. States some findings. Incomplete or missing overview of report organization	Vague or unclear statement of the research problem. States aim of research. States main findings. Incomplete overview of report organization	Clear statement of the research problem. States aim of research and mentions importance of topic. States main findings. Incomplete overview of report organization	Superior statement of the research problem. States aim of research and communicates importance of topic. States main findings. Brief but complete overview of report organization.
Research aims and objectives	Unclear research aims and/or objectives and/or intent of project. Maybe too broad and unrealistic. Missing measurable outcomes.	Describes research aims and objectives and intent of project. Partially focused but may be too broad. Missing measurable outcomes.	Describes research aims and objectives and intent of project. Mostly focused and achievable. Some mention of measurable outcomes	Excellent description of research aims and objectives and intent of project. Focused and achievable and measurable outcomes.

Criteria	Beginning (0-5)	Developing (6-11)	Proficient (12-16)	Mastery (17-20)
Background	Descriptive or narrative review of existing work, unclear or vague research areas. Missing proposal linkage to research gaps (or no gaps articulated). Citing might in poor or incorrect formatting.	Reviews existing work & identifies some research areas. Some linkage between the proposal to the research gaps identified. Cites most information in APA format.	Reviews existing work & synthesizes relevant research areas. Clearly links the proposal to the research gaps identified. Cites information accurately in APA format.	Critically reviews existing work, synthesizes relevant research areas and opposing views. Clearly links the proposal to the research gaps identified. Cites relevant information accurately in APA format..
Research significance and innovation	Vague description of significance of proposal and not justified by Background. Missing or incomplete how proposal will improve ICT knowledge, technology and /practice or society/industry.	Some significance of proposal mentioned. Not clearly justified by Background. Vaguely mentions how proposal will improve ICT knowledge, technology and /practice. Some benefits to society/industry mentioned. Unclear on innovation of proposal.	Explains significance of proposal justified by Background and/or how proposal will improve ICT knowledge, technology and /practice. Highlights some benefits to society/industry. Identifies innovation of proposal.	Superior explanation of significance of proposal justified by Background and how proposal will improve ICT knowledge, technology and /practice. Clearly highlights benefits to society/industry. Identifies innovation of proposal and justifies claims with reference to Background

Assignment 3: Marking Rubric Cont.

Criteria	Beginning (0-5)	Developing (6-8)	Proficient (9-11)	Mastery (12-15)
Research methods	Some research methods for topic, but some unjustified or irrelevant research methods. Incomplete R&D activities breakdown. Vague on how project would be evaluated.	Some research methods for topic. Justifies some research methods. Mentions R&D activities. Vague on how project would be evaluated.	Some appropriate research methods for topic. Justifies & defines appropriate research methods. Defines R&D activities breakdown. Some project evaluation methods mentioned	Clear, logical, and appropriate research methods for topic. Justifies & defines appropriate research methods. Defines R&D activities including team work breakdown. Clear project evaluation methods
Criteria	Beginning (0-5)	Developing (6-8)	Proficient (9-11)	Mastery (12-15)
Conclusion	Conclusion does not link all components clearly. Missing references to research problem or significance	Conclusion links all components but missing a logical or compelling flow or argument. Vague references to research problems or significance	Clear conclusion linking all components but missing a logical or compelling flow or argument. Some reference to research problems or significance	Superior conclusion linking all components into a coherent, logically flowing summary. Refers to research problems and significance.