ASSESSMENT 2 BRIEF	
Subject Code and Title	REM502 Research Methodologies
Assessment	Research Tools and Methodologies
Individual/Group	Individual
Length	1,500 words (+/- 10%)
Learning Outcomes	The Subject Learning Outcomes demonstrated by successful completion of the task below include: c) Develop ICT models, frameworks, and hypotheses to discover relationships between research variables. d) Employ suitable research methodologies to guide data collection, execution and analysis methods for the study. e) Integrate ethical principles related to the design of R&D solutions.
Submission	Due by 11:55 pm AEST/AEDT Sunday end of Module 8 (Week 8)
Weighting	30%
Total Marks	100 marks

Task Summary

You will need to write a report. This assessment task is designed to help determine the research methodology and, subsequently, the research tools needed, based on the literature review that you have conducted in Assessment Task 1. The focus of this Assessment Task 2 here is on a comparative analysis of research methodologies that will assist you in preparing your final assessment—Assessment Task 3, your Research Proposal.

Please refer to the **Task Instructions** for details on how to complete this task.

Context

This assessment task, a report on Research Methodologies and Tools is formative in nature and constitutes the second stage in your work towards your final Research Proposal (Assessment Task 3). Each assessment task in this subject is designed to build competency in research methodologies and, as such, are not stand-alone assessment tasks. Assessment task 2 is designed to help you decide on the research methodologies that are appropriate for you to conduct your research.

This assessment task requires you, as a Software Engineering or an Information Technology (IT) student, to research and prepare a comparative analysis of the different research methodologies available depending on the nature of research that you wish to embark on, i.e., academic or industry-based research. Accordingly, you will have to consider either academic or industry (IT)-based research methodologies. Therefore, the methodologies, such as qualitative, quantitative, mixed methods, design science or prototyping, should be analysed to determine what would be the best approach for your Research Proposal (Assessment 3 in Week 12). Once you have determined the methodological approach that you wish to follow, you will need to decide on the types of research tools that you will need. Research instruments (or tools) may include surveys, questionnaires, interviews, focus groups, and quantitative statistical analysis, among others. For example, if you plan to use a survey, a questionnaire or an interview, you need to write the specific questions that you intend to ask and describe the data analysis method that you will apply to the responses that you will collect. Please include the questionnaire in the Appendix.

Task Instructions

The Comparative Analysis Report is an individual assessment and accounts for 30% of your overall grade in this subject. Your report should have a word count of 1,500 words (+/-10%) including the following key elements:

1. The structure and contents of the Assessment task 2 is as follows:
    - The title of your research
    - Research questions (Modified version based on Assessment 1 feedback). Aims and objectives (Modified version based on Assessment 1 feedback).
    - Comparative Analysis of research methodologies.
    - Proposed methodology and research methods.
    - Rationale for the choice of research method
    - Ethical consideration.
    - Data analysis strategies and tools.
    - References.
    - Appendices (if applicable).

2. To undertake comparative analysis of research methodologies, you need to consider an analytical approach to evaluate qualitative, quantitative, and mixed methods research methodologies. Outline the strengths and

weaknesses of each approach in relation to your proposed research project. What steps does each approach utilise? What are the limitations associated with each approach? Justify why the approach is still selected despite the limitations.

3. To propose a methodology for your research project, based on the analysis conducted as step 2 above, you need to determine which research methodology (i. e., qualitative, quantitative or mixed methods) is appropriate for your research project. Discuss the reasons behind your choice of methodology. Outline the software design, relate the methodologies and methods to the research question(s). Indicate the following points:
   a) What methods are being used to address the research question(s)?
   b) What tools/research instruments are you planning on using?
   c) How do you plan on triangulating the data that you will collect?
   d) What ethical issues need to be taken into consideration?
   e) How have ethical considerations influenced the development of your research tools?

Note that the terms used in the steps listed above are defined as follows:

- **Methodology** is a systematic examination of the methods applied to any research field. It may be comprised of a system of methods designed to achieve the research outcome.
- **Methods** are the particular tools/research instruments that are intended for being used. (e.g., qualitative interviews, or quantitative statistical analysis).
- **Ethics** is an important issue when developing specific research tools, particularly when conducting research involving humans.

4. Appendices: You need to include any tools/research instruments that you have developed in this section. Please use different appendices (e.g., Appendix A, Appendix B) for different instruments. Appendices do NOT count towards your report's word count.

Referencing

It is essential that you use appropriate APA style for citing and referencing research. Please see more information on referencing here http://library.laureate.net.au/research_skills/referencing

Submission Instructions

The report will be submitted via the Assessment link in the main navigation menu in **REM502 Research Methodologies**. The Learning Facilitator will provide feedback via the Grade Centre in the Blackboard Learning Management System. Feedback can be viewed in My Grades.

Academic Integrity Declaration

I declare that except where I have referenced, the work I am submitting for this assessment task is my own work. I have read and am aware of Torrens University Australia Academic Integrity Policy and Procedure viewable online at http://www.torrens.edu.au/policies-and-forms
I am aware that I need to keep a copy of all submitted material and their drafts, and I will do so accordingly.

TORRENS UNIVERSITY AUSTRALIA

Assessment Rubric

Assessment Attributes	Fail (Yet to achieve minimum standard) 0-49%	Pass (Functional) 50-64%	Credit (Proficient) 65-74%	Distinction (Advanced) 75-84%	High Distinction (Exceptional) 85-100%
Topic, research questions and aims/objectives (Modified version based on Assessment task 1 feedback) **Percentage of this criterion = 5%**	Topic and research questions are not presented or are irrelevant; feedback is not considered. Aims/objectives are missing or do not match the research questions.	Topic and research questions are presented but are not clear and specific. The feedback is not addressed completely in updating the research questions Aims/objectives loosely match the research questions; have not been updated based on feedback given on questions	Topic and research questions are fairly clear and specific. Research questions are updated as per the feedback but could be further redefined. Aims/objectives are fairly developed properly based on the research questions and feedback provided.	Topic and research questions are mostly clear and specific. Research questions are effectively redefined based on the feedback and are reflected well in redefining aims /objectives. Aims/objectives are mostly developed clearly based on the research questions.	Topic and research questions are very clear and specific. No feedback was provided as the research questions/Aims/ Objectives required no improvement. Aims/objectives are effectively developed based on the research questions. or
Comparative analysis of research methodologies **Percentage of this criterion = 20%**	Comparative analysis of research methodologies is not provided. The strengths and weaknesses of each of the approaches is not provided.	Comparative analysis of the considered research methodologies (qualitative, quantitative, and mixed research) is basic. The strengths and weaknesses of each approach are not analysed in enough depth and are not in line with the proposed research	Comparative analysis of the considered research methodologies (qualitative, quantitative, and mixed research) is well developed. The strengths and weaknesses of each approach are objectively summarised in relation to the proposed	Comparative analysis of the considered research methodologies (qualitative, quantitative, and mixed research) is thoroughly developed. The strengths and weaknesses of each approach are effectively summarised in relation to the proposed research project.	Comparative analysis of the considered research methodologies (qualitative, quantitative, and mixed research) is thoroughly developed and sophisticated. The strengths and weaknesses of each approach are summarized in a

		project.	research project.		sophisticated manner in relation to the proposed research project.
Assessment Attributes	**Fail (Yet to achieve minimum standard) 0-49%**	**Pass (Functional) 50-64%**	**Credit (Proficient) 65-74%**	**Distinction (Advanced) 75-84%**	**High Distinction (Exceptional) 85-100%**
Proposed methodology and research methods **Percentage of this criterion = 35%**	No justification provided for the selection of the research design, paradigm and methodology. Methodology does not match with the research questions presented. Methods and techniques for data collection are not described or are inappropriate.	Little justification provided for the selection of the research design, paradigm and methodology. Methodology vaguely matches the research questions presented. Methods and techniques for data collection are described to some extent but are not completely relevant to the research question(s).	Good justification provided for the selection of the research design, paradigm and methodology. Methodology aligns appropriately with the research questions presented. Methods and techniques for data collection are well described and are relevant to the research question(s) but the description may be unclear at times.	Excellent justification provided for the selection of the research design, paradigm and methodology. Methodology aligns well with the research questions presented. Methods and techniques for data collection are proficiently and clearly described and are relevant to the research question(s).	Exceptional justification provided for the selection of the research design, paradigm and methodology. Methodology aligns very closely with the research questions presented. Methods and techniques for data collection are effectively described in detail and are highly relevant to the research question(s).

Data analysis strategies and tools **Percentage of this criterion = 15%**	Data analysis techniques are not presented or are irrelevant to the methodology and methods.	Some data analysis techniques are presented but their connection to the methodology and methods is not adequately justified.	Most of the relevant data analysis techniques are presented and have a good connection to the methodology and methods .	All the relevant data analysis techniques are presented and have an excellent connection to the methodology and methods.	All the relevant data analysis techniques are presented and have an exceptional connection to the methodology and methods.
Assessment Attributes	**Fail (Yet to achieve minimum standard) 0-49%**	**Pass (Functional) 50-64%**	**Credit (Proficient) 65-74%**	**Distinction (Advanced) 75-84%**	**High Distinction (Exceptional) 85-100%**
Ethics and rigour **Percentage of this criterion = 10%**	No or very limited incorporation of the ethical components and a poor description of the ways to address them. No or very limited interpretation of reflexivity and how it influences the data.	Limited incorporation of aspects of ethical components and a fair description of the ways to address them. Limited interpretation of reflexivity and how it influences the data.	Incorporation of a fair number of relevant aspects of the ethical components and an acceptable description of the ways to address them. Good interpretation of reflexivity and how it influences the data.	Incorporation of most of the relevant aspects of the ethical components and a good description of the ways to address them. Very good interpretation of reflexivity and how it influences the data.	Incorporation of every relevant aspect of the ethical components and a detailed, insightful description of the ways to address them. Thorough and insightful interpretation of reflexivity and how it influences the data.
Effective Communication (Written) **Percentage of this criterion = 10%**	Presents information which is not clearly organised or easy to follow. Meaning is repeatedly obscured by errors in the in the	Communicates in a mostly readable manner that largely adheres to the given format. Meaning is sometimes difficult to follow.	Communicates in a coherent and readable manner that adheres to the given format. Meaning is fairly easy to follow. Information, arguments and	Communicates coherently and concisely in a manner that adheres to the given format. Meaning is mostly easy to follow. Information, arguments and evidence	Communicates eloquently. Expresses meaning coherently, concisely and creatively within the given format.

	communication of ideas, including errors in structure and logical sequence, that render information, arguments and evidence unclear and illogical. Specialised language and terminology are rarely or inaccurately employed. Many errors in spelling, grammar, and/or punctuation.	Information, arguments and evidence are structured and sequenced in a way that is not always clear and logical. Generally employs specialised language and terminology with accuracy. Some errors in spelling, grammar and/or punctuation.	evidence are well structured and sequenced in a way that is clear and logical. Accurately employs specialised language and terminology. Occasional minor errors present in spelling, grammar and/or punctuation.	are structured and sequenced in a way that is, clear, logical and persuasive. Accurately employs a wide range of specialised language and terminology. Minimal errors in spelling, grammar and punctuation.	Discerningly selects and precisely employs a wide range of specialised language and terminology. No errors in spelling, grammar and punctuation.
Correct use and citation of key resources and evidence **Percentage of this criterion = 5%**	Demonstrates inconsistent use of credible and relevant sources to support and develop ideas. Citation and referencing are omitted or do not follow APA guidelines for most in-text citations and/or reference list entries.	Demonstrates use of credible and relevant sources to support and develop some ideas. Shows evidence of little scope within the organisation for sourcing evidence. Most in-text citations and/or reference list entries follow APA guidelines. Some errors are present	Demonstrates use of credible and relevant sources to support and develop most ideas. Shows evidence of good scope within the organisation for sourcing evidence. Almost all in-text citations and reference list entries follow APA guidelines; only a few citation and referencing errors are present.	Demonstrates use of credible and relevant sources to support and develop almost all ideas. Shows evidence of very good scope within and outside of the organisation for sourcing evidence. Almost all in-text citations and reference list entries follow APA guidelines; only one or two citation and referencing errors.	Demonstrates use of - credible and relevant sources to support and develop all ideas. Shows evidence of excellent scope within and outside of the organisation for sourcing evidence. All in-text citations and reference list entries follow APA guidelines; no citation or referencing errors.

The following Subject Learning Outcomes are addressed in this assessment task

SLO c)	Develop ICT models, frameworks, and hypotheses to discover relationships between research variables.
SLO d)	Employ suitable research methodologies to guide data collection, execution and analysis methods for the study.
SLO e)	Integrate ethical principles related to the design of R&D solutions.