

# 32144 Technology Research Preparation

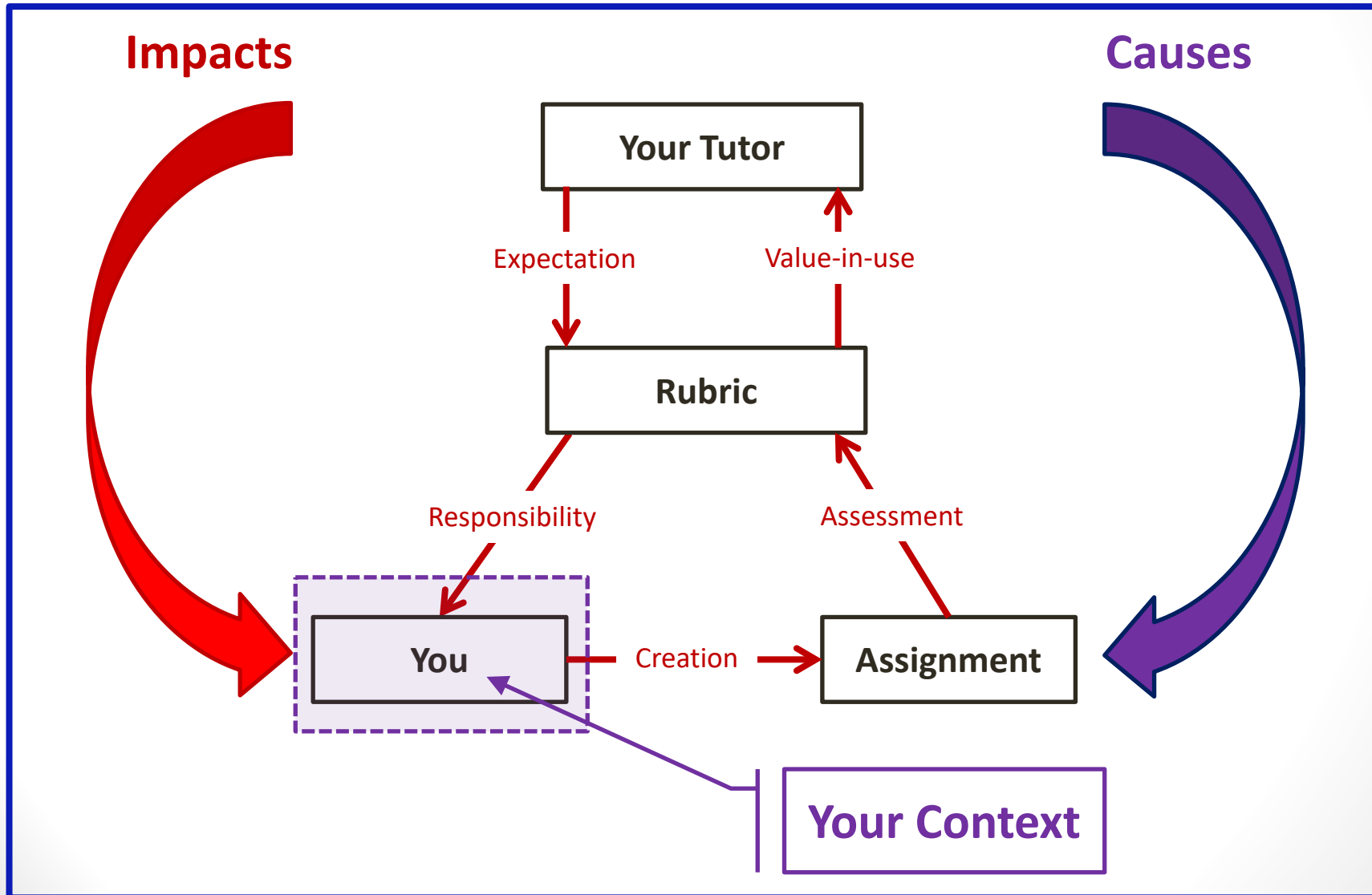
Week 2. 27<sup>th</sup> February 2024.

Critical reading and Writing  
An Introduction.  
(What about Critical Thinking).

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Your context when working on TRP Assignments (based on Week 1).



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## Using a Rubric

TRP - Assessment Task 2

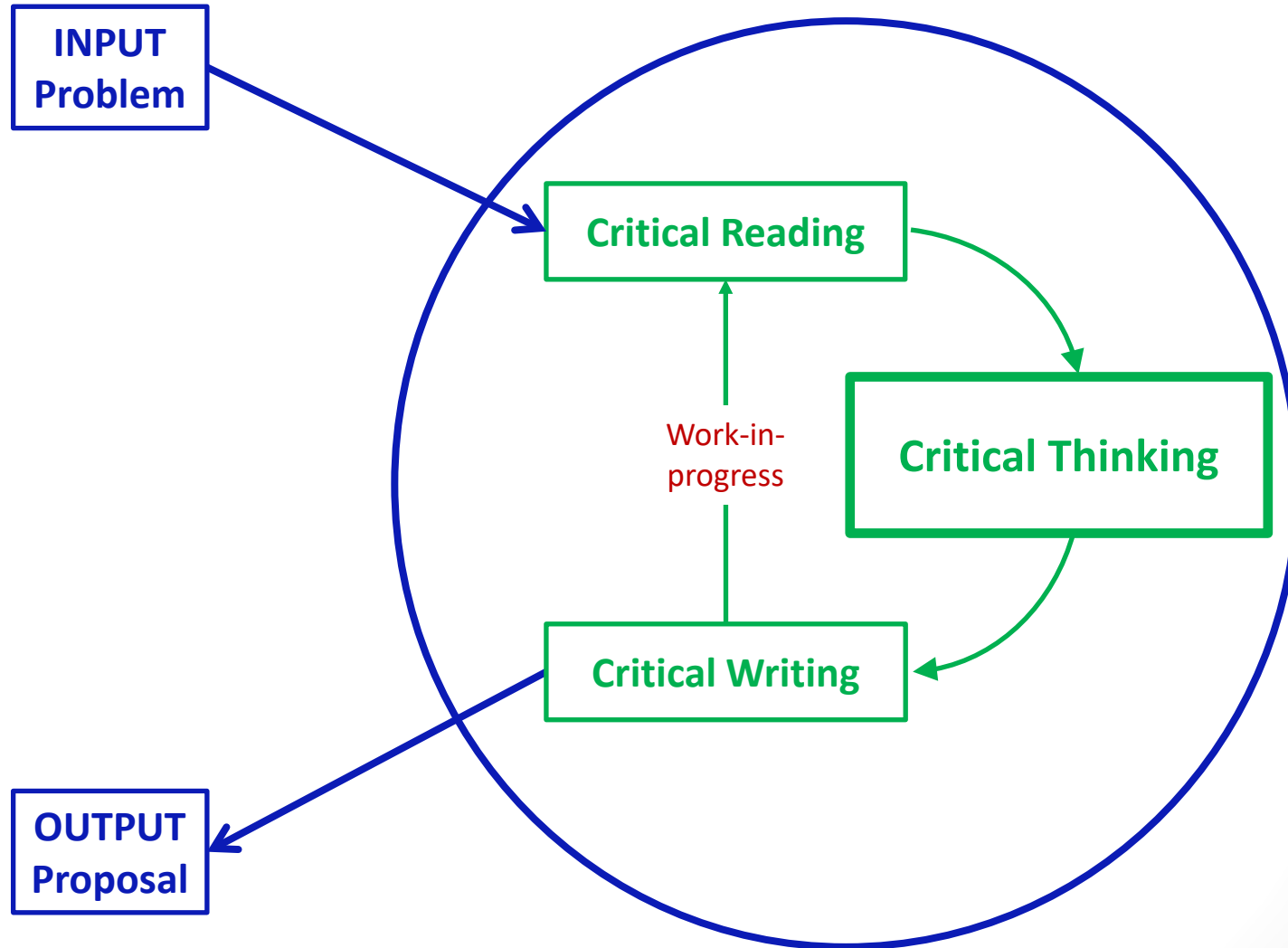
Criteria	Ratings					Pts
<b>INTRODUCTION</b> Presents the problem, sets up the field, and states the student's point of view; Clearly stated and well-written aims, objectives and significance of the knowledge contribution of the review; Orients the reader to the report by providing an overview.	<b>20 to &gt;17.0 pts MASTERY</b> Superior statement of the research problem. States aim of research and communicates importance of topic. States main findings. Brief but complete overview of report organisation.	<b>17 to &gt;11.0 pts PROFICIENT</b> Clear statement of the research problem. States aim of research and mentions importance of topic. States main findings. Incomplete overview of report organisation.	<b>11 to &gt;7.0 pts DEVELOPING</b> Vague or unclear statement of the research problem. States aim of research. States main findings. Incomplete overview of report organisation.	<b>7 to &gt;0.0 pts BEGINNING</b> Vague or unclear statement of the research problem. Vague or missing aim of research statement. States some findings. Incomplete or missing overview of report organisation.	<b>0 pts No Marks</b>	20 pts
<b>CRITICAL EVALUATION</b> Critical evaluation process that sets out an appropriate logic and consistent method; Ability to search sources	<b>15 to &gt;12.0 pts MASTERY</b> Clear and logical critical evaluation process in support of the research problem and objectives. Justifies & defines	<b>12 to &gt;8.0 pts PROFICIENT</b> Justifies & defines appropriate critical evaluation process for the topic. Some appropriate evaluation	<b>8 to &gt;3.0 pts DEVELOPING</b> Some critical evaluation process and methods described in support of the topic. Justifies some	<b>3 to &gt;0.0 pts BEGINNING</b> Some critical evaluation process for topic, but some unjustified or irrelevant evaluation	<b>0 pts No Marks</b>	

Always aim to cover all the Points in the Mastery section

Criteria Correspond to Sections in your submission.

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Methodical: Critical Thinking, Critical Reading and Critical Writing.



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## Critical Thinking is necessary when a choice is required:

- Uncertainty exists, and
- There is no one right answer

## What is critical thinking?

- Being objective. Methodically analyse the problem based on context and facts (Statements without citations are just assertions).
- Analysing facts to understand the problem.
- Using triangulation. Using multiple sources of data or multiple approaches to analysing data to enhance the credibility of a research study through balanced argument.
- Address a situation based on all available facts and information. Using critical thinking includes sorting and organising facts, data and other information to define a problem and develop effective solutions.

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## Skills of Critical Thinking (positive mindset to begin with).

- **Observation.** Starting point for critical thinking. Quickly sense and identify a new fact. Understand why something might be an issue. Tolerate ambiguity - even researchers do not have all the answers yet!
- **Analysis.** Knowing what facts, data or information about the problem are: importance, their context, cause and effect on potential solution.
- **Collaboration.**
  - Explain, discuss and learn about issues and possible solutions.
  - Identify others' positions, assertions, and claims - and their limitations.
  - Evaluate evidence from alternative points of view (social triangulation).
  - Weigh up arguments and evidence in a balanced way.
  - Recognize false logic and other persuasive devices.
  - Persevere through researching and drafting arguments.
- **Inference.** Drawing conclusions about information to develop an answer.
- **Problem solving.** Execute the solution.

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## Information Literacy – Supporting Critical Thinking

- Recognize a need for information.
- Distinguish ways to address information gaps.
- Construct strategies for locating information.
- Locate and access information.
- Compare and evaluate information obtained from different sources
- Organize, apply and communicate information to others.
- Synthesize and build upon existing information, contributing to the creation of new knowledge

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## Principles Supporting Critical Reading

- Have respect for other people's ideas.
- Be open & fair-minded, see more than one side of an issue.
- Recognise your own personal or cultural biases. Ask yourself: "Is what I agree with 'correct' when looking at the literature?"
- Appreciate differences, don't ignore them.
- Possess healthy scepticism - drawn from evidence you are reading.
- Think about issues or concepts as a whole, intricate system, not just singular events.
- Avoid accepting generalisations.
- Justify arguments through robust evaluation of evidence.
- Develop different approaches to reading texts.



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## Different Types of Critical Reading

### Inspectional Reading. Systematic Skimming.

1. Does the book deserve reading? Check TOC, indexes, references, quick skim

2. Superficial Reading.

First read the book without stopping to look up or think about sections.

Purpose is to gain overall impression.

3. More detailed reading

Select some sections that you want to follow-up.

You will understand more as you re-read the book.

### Analytical Reading. (Make notes and diagrams Book's structure, Key concepts, discussions between books).

1. Classify/prioritize book
2. Summarize book in a sentence or short paragraph.
3. Show book's concept organisation
4. More details  
Terms  
Messages  
Relevance  
Well supported  
Propositions  
Arguments.

### Syntopical Reading. (Read numerous books on same subject. Compare and contrast ideas).

1. Build a bibliography.
2. Find relevant passages and add simple notes to bibliography creating a knowledge map.
3. Common agreements
4. Clarification of positions
5. Define issues
6. Analyse discussions
7. Both work in progress and your main reference. Use PowerPoint slides.

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## Critical Reading – Check Author’s Credentials:

- Who is/are the author/s? – What are their areas of expertise; number of citations; institutional connections.
- When was the text published or updated? Is it recent enough for your topic?
- How much of the content is fact and how much opinion? Is the language objective or emotive? Is it balanced?
- Is the argument supported by evidence? What kind of evidence? How is the argument developed - clearly and sequentially, or a mess?

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## Critical Reading – Assessing Reliability

- Identify authors' evidence for their main points of argument, hypotheses, results, and conclusions (Make/refer back to your lists, tables or diagrams of these ideas with referencing information).
- A good way to identify if the results of an experiment are reliable is to check how many participants were involved in the study, and if the results were calculated appropriately for the context of the study.

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## Critical Reading – Identifying Bias

- Check that the information you are gathering is without bias. Check if source analyses and evaluates a range of other perspectives.
- If bias is present, you may need to find another source that presents an appropriate counter-argument, or a source that presents a range of perspectives.
- Check if article (or author) is sponsored by a particular company that would benefit financially from the results.
- Do a brief online search of the companies listed to check for potential bias

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## Critical Writing – Academic Writing Support at UTS

The ability to write clearly and academically is an essential skill at university. At HELPS, UTS can review your writing and provide you with individualised feedback. The only way to improve your writing is to be aware of any issues you may have, and learn how to overcome them.

<https://www.uts.edu.au/current-students/support/helps/writing-support>

AcaWriter helps develop your academic and reflective writing by providing instant, automatic feedback on your drafts, 24/7.

AcaWriter is a software tool that helps you develop your academic and reflective writing by providing you with automatic feedback.

<https://www.uts.edu.au/research-and-teaching/teaching-and-research-integration/acawriter>

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## Critical Writing – Clarification.

- Clarify your task. Make sure you will meet the requirements of the rubric.
- How are you required to write? Review Academic writing and get help. Talk with your tutor.
- Check that you understand the material you have read. Be sure to not only re-read and review your sources carefully, but also review your lecture notes and assessment tasks handouts.

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## Critical Writing – Reviewing, organising content, planning.

- Make lists, tables or diagram of ideas with referencing information (especially page numbers) so you can track where you retrieved information from.
  
- Use a Literature Review Matrix(upcoming tutorial).  
<https://academicguides.waldenu.edu/writingcenter/assignments/literaturereview/matrix>).
  
- May need to revisit the texts you selected. Understand and develop different approaches to reading texts.
  - Inspectional – systematic skimming
  - Analytical – reading for understanding
  - Synoptic – mapping texts and their relationships

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## Critical Writing – Submission Time.

- Read your work carefully for grammar, syntax, spelling and layout.
- Check in-text citations and bibliography. Do you need better support for facts/methodology/reasoning?
- Trace your arguments from initial assumptions to evaluation to Logical conclusion. Ask: Does it make sense?
- Make sure your arguments are reasoned, valid, and relevant to your research topic. Does the content fit the rubric requirements?
- Have you completely answered all the rubric requirements at an the highest level?
- Have you entered all the ID required (Group, students, ID's, etc)?



**Thank You.**

**Questions please?**