The AI Assessment Venn: Outcome Context Method (OCM) Framework

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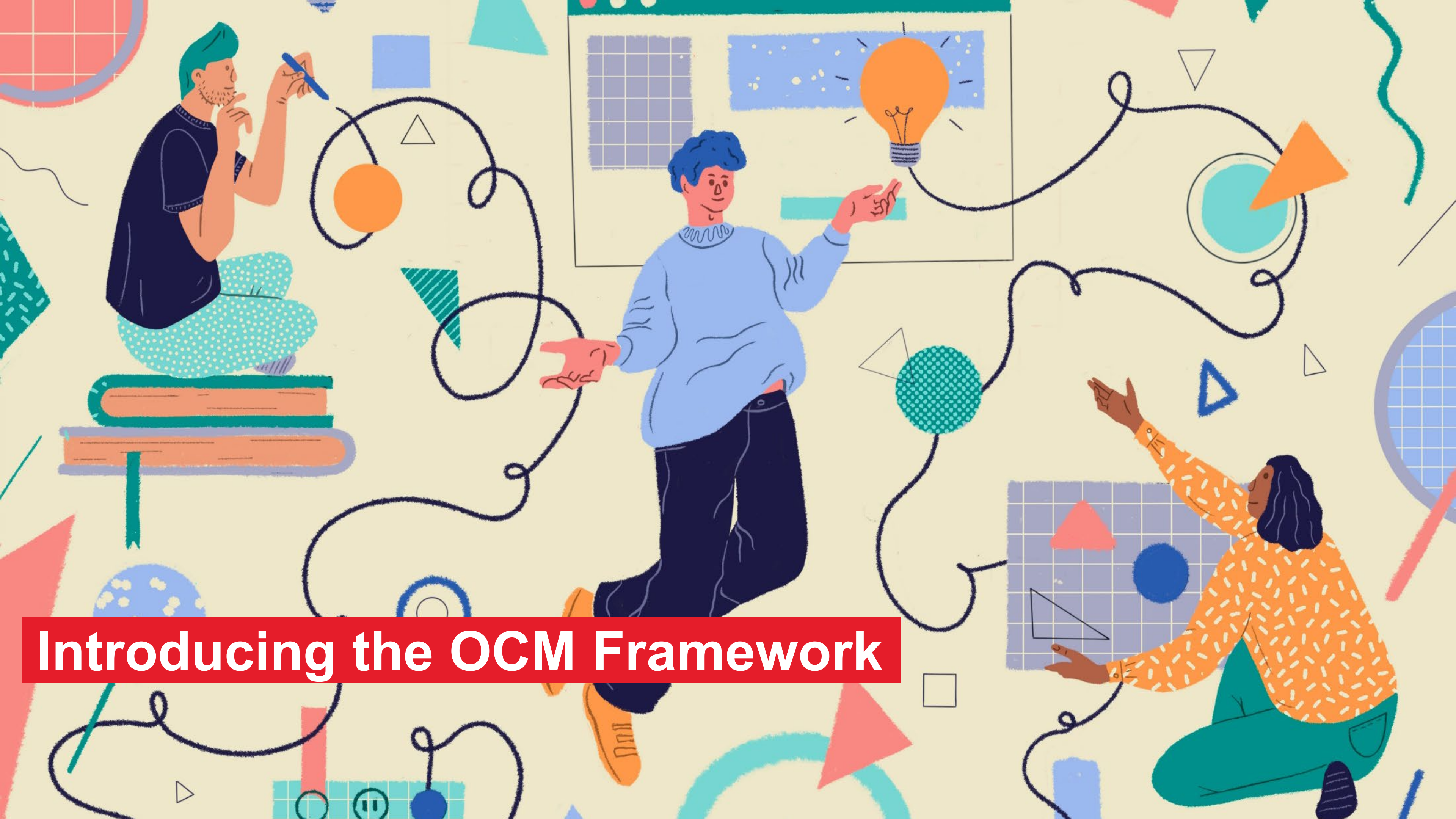
Introducing the OCM Framework



The AI Assessment Problem

The AI assessment problem is twofold:

- How do we make decisions regarding needed professional/discipline knowledge, skills and behaviour based on the increasingly rapid emergence of AI capabilities? *And*
- How do we evolve our assessment practice to reflect these decisions, appropriately gathering evidence of student capability and allowing educators to provide guidelines that can be realistically upheld?

To address this problem, we first need to make critical contextual decisions regarding AI based on professional/discipline expertise to understand what our students need. Then, we must use established educational methodologies to help design assessments that reinforce the validity of that decision and provide appropriate guidance.

What tasks are already automated or going to become automated (requiring no human action)?	Our assessments must evidence student capability to automate, assure automated actions, define metrics such as quality and accuracy.	Example assessment guideline: No restrictions on AI use
What tasks *must not or cannot currently* involve artificial intelligence?	Our assessments must indicate the flaws, risks, and limitations of AI or only be possible to complete without it.	Example assessment guideline: Restrict all use of AI
What tasks involve a human using artificial intelligence and how does this occur?	Our assessments must provide evidence of student and AI cooperation, decision making, process, and outcome.	Example assessment guideline: Restrict the ways/types of AI use

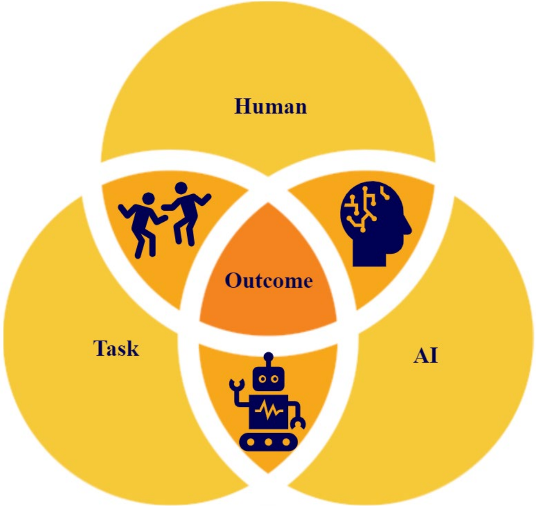
The OCM Framework: Background

The Outcome Context Method (OCM) Framework is underpinned by two principle theories to allow educators to make intentional decisions about AI and their discipline professional impacts, pedagogy, and consequently their assessment design rather than establishing a rule-based approach.

Two theories addressing pedagogy and broader context underpin the methodology of the OCM Framework:

- Pedagogy:
  - The Cooperative learning model provides the pedagogical positioning of educator, student, and AI in the achievement of the learning outcomes. This prioritises interaction, interpersonal skills, individual accountability, and process reflection. It also highlights the various interdependencies that exist in achieving a required outcome.
- Discipline/Professional Context:
  - The Sociotechnical theory informs the context of how AI and human is situated, and the necessary considerations for addressing the various factors of how they influence each other to achieve a quality outcome. It acknowledges that integrating AI across disciplines and different professional environments requires addressing social and technical factors.

Taken together, these two theories help reinforce the common narratives in relation to AI use – the ‘human in the loop’, ‘task stewardship’, and of course that adage of ‘AI won’t take your job, but a human using AI will’.



The OCM Framework is presented in a Venn diagram to provide easy interpretation and use. It attempts to avoid the identified pitfalls of many proposed assessment framework solutions that fail to support structural changes and underpin the importance of validity (Corbin, T., Dawson, P., Nichola-Richmond, K., & Partridge, H., 2025; Corbin, T., Dawson, P., & Liu, D., 2025; Curtis, G., 2025; Dawson, P., Bearman, M., Dollinger, M., & Boud, D., 2024)

Purpose of the AI Assessment Venn

The Outcome Context Method (OCM) Framework is presented as a Venn diagram with the format serving a specific purpose; to illustrate the theoretical focus on interaction and interdependency. The Venn visualises that there are no binary choices (AI/no AI), but rather a spectrum of possibilities.

The three overlapping circles represent how Human, AI, and Task are fundamentally interconnected in modern learning and professional environments.

The overlapping sections show where:

Human and Task overlap:

This represents how humans understand and engage with the work requirements

AI and Task overlap:

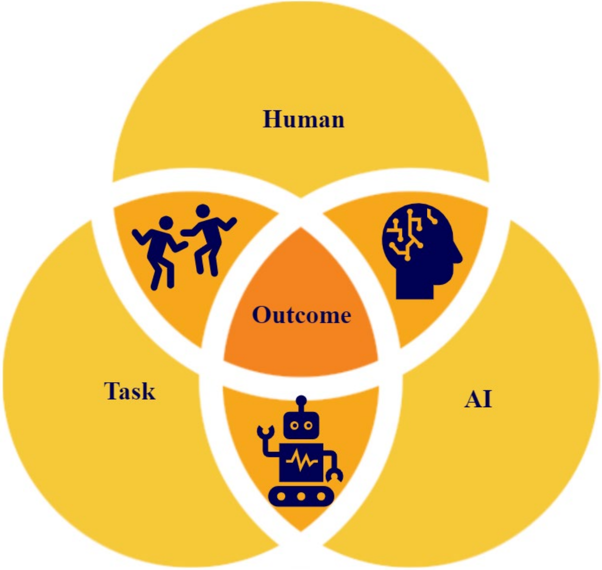
This identifies where AI tools interact directly with the task

Human and AI overlap:

This indicates the cooperative space for humans and AI tools working together

The union situates the defined Outcome:

The central overlap of all three circles represents the learning outcome that measures the successful completion of the task (according to criteria)



Using the logic of the Venn it is possible to identify various positions within to explore and define how each element can interact in any context.

The label 'AI' acknowledges the collection of interrelated technologies and tools, as per many existing established definitions. However, in this resource the focus will be predominantly on generative artificial intelligence (genAI).

AI Assessment Design: Identifying Relational Connections

To use the AI Assessment Venn educators and practitioners should identify various positions to work through their design. To aid this, a set of relational connections have been identified and highlighted with alphanumeric boxes.

The key for interpreting the relational connections is as follows:

Automated (Least human)

1a The only humans are those that trained the AI and its dataset (human oversight input focused)

1b Incorporating some human in-the-loop to review and conduct Assurance (human oversight output focused)

Non-automated (Least AI)

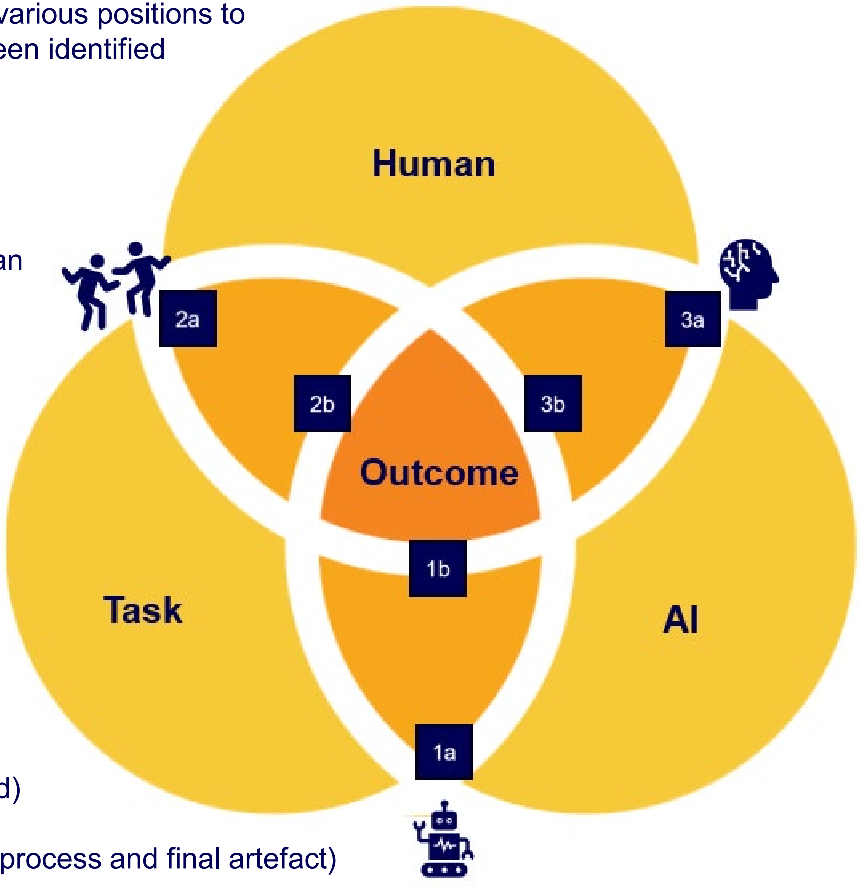
2a The human completes the task with no use of AI

2b The human completes the task but uses AI for non-primary assessed components (e.g. brainstorming, grammar or editing) – this may be the result of AI being integrated into standard tools (e.g. Microsoft)

Human and AI (Co-operative)

3a The human and AI must co-op to achieve outcome (process focused)

3b The human and AI must co-op to achieve the outcome (inclusive of process and final artefact)

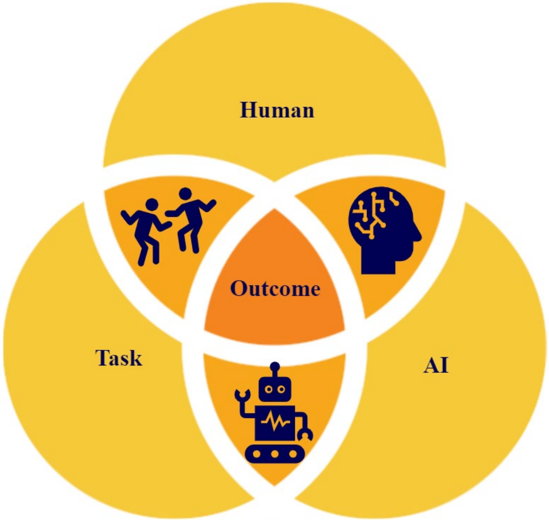


A Focus on Demonstrating Outcomes

To effectively take advantage of the OCM Framework requires an outcome-based approach to learning and assessment. Whether this is applied in competency based or norm-referenced assessment, it seeks a defined and measurable outcome that requires demonstration of knowledge, skills and behaviour.

Some outcomes have fundamentally shifted in terms of expectations because of what AI can do, especially with the rapid rise and proliferation of genAI technologies in society. This is the same with any technology, such as calculators, spell checkers, computers, the internet, digital art, film, scientific instruments, medical equipment, and advances in manufacturing. The distinctive feature of AI is that it is not synonymous with a single technology, but a combination of many with variability.

However, outcome shifts do not indicate the outcome description has changed or requires redefinition. The shift often reflects expectations in how the outcome is achieved, and therefore, translates to adjustment in the methods we use to measure and evidence that outcome (and the knowledge, skills or behaviour we seek to have demonstrated).



Outcomes-based education relies on the practice of constructive alignment, which helps to explain why the OCM Framework does not position the ‘task’, or method of measurement, in the centre of the Venn diagram. This can indicate structured curriculum development towards the outcome with use of the human, AI and task elements.

Educators define a task, or method of measurement (such as assessment), to be completed based on the outcome requiring demonstration. This allows the AI Assessment Venn to be used for both design and re-design of assessments.

Educators consider what parts of the task are required to count towards the assessment based on their rubric and the assessment type used (e.g. presentation, report, essay, test, practical, debate, observation, digital media, design prototype, portfolio, performance). Identifying the appropriate relationship with assessment type and primary components for the outcome is pivotal in shifting practice to integrate multi-step, lower and higher order capabilities.

The OCM Framework in Practice

Tips for Applying the OCM Framework as an Educator Resource

To apply the OCM Framework effectively and easily in practice requires consideration of the following:

- Introducing the framework and its related theories
  - The framework is not prescriptive and focused on supporting changes in practice because of AI (or in anticipation of its impacts) guided by educators, discipline experts, or industry practitioners. The underpinning theories help frame AI use in appropriate pedagogy and real-world critical thinking regarding how technology and humans operate. It aids metacognitive approaches to AI for educators and students by positing what the ‘suitable’ emphasis of human x AI should be in context.
  - The framework consists of the: theoretical rationale and approach, AI Assessment Venn, and related process.
- Providing an analogy and custom examples for disciplines using the AI Assessment Venn
  - Use of a generic or playful outcome analogy supports introduction of the framework mindset and use of the AI Assessment Venn. The analogy can be connected to institutional or professional practices if appropriate.
  - Given the diversity of AI applications and relationships to different disciplines and professions, a custom outcome example using a specific AI application or foundational professional skill is recommended. Again, this aids in contextualising to current trends, challenges, or practices. It is beneficial to work through this discipline example as a collaborative facilitated activity.
- Integrating with institutional guidelines on AI assessment to reinforce integrity
  - The OCM places no value judgement on AI. It is designed to be a neutral ideological tool for AI to accommodate different contexts and decisions and can therefore integrate with diverse institutional positions and solutions. As the Venn is used, personal or ideological beliefs can also be accounted for. Users do not need to be ‘pro-AI’ or ‘anti-AI’; the focus is to allow room for simply understanding how AI might influence the demonstration of an outcome.
  - In using the AI Assessment Venn for assessment design and redesign (in addition to broader curriculum considerations for scaffolding outcomes), it will provide additional benefit for academic integrity when combined with assessment guidelines and student submission declarations. This can be done by associating positions in the Venn to an appropriate matching guideline.

Using the AI Assessment Venn: Steps to follow

The Venn is easy to draw and recreate – so it can be used in digital or physical formats individually or in group workshops. Alternatively, using the image of the Venn to conduct a thought exercise and document in a preferred format or method relevant for curriculum or assessment (re)design. Importantly, it should be used as part of existing assessment practices and processes, so adapt and integrate to suite as appropriate.

Part 1: Unpacking the Outcome

Using existing constructive alignment practices, the central focus of the AI Assessment Venn is the outcome and framing of the knowledge, skill and/or behaviours required (in vocational education, this would be defined in a unit of competency).

1. Define your Outcome. This outcome will describe a measurable performance or artefact e.g. design a business process for improving customer response times according to quality metrics
2. Define a Task, or method of assessment, to achieve the outcome. The task will involve the student providing evidence that is measured against criteria that represent the outcome e.g. a checklist of knowledge/skill/behaviour or rubric features (quality metrics = presence of certain time/sentiment/review rating)
3. Identify the Human knowledge, skill or behaviour *required based on the outcome* e.g. problem solving, interpersonal skills.
4. Identify the AI capabilities, based on an identified tool or set of technologies, that could either contribute to the outcome or deliver the outcome e.g. workflow creation, coding, sentiment analysis, information retrieval.

You may have an existing outcome/outcome set and task to map into the AI Venn. If so, do this – pay particular attention to reviewing your task and adequately capturing what the Human (Student) *is required to demonstrate,* and AI (Various technologies) *is capable of*. This will provide indication of any necessary assessment adaptation or redesign.

Using the AI Assessment Venn: Steps to follow (Continued)

Part 2: Intersections and Relationships

Now define the intersections of the Venn with a simple statement that describes:

5. how the human completes the task.
6. how the AI completes the task.
7. a way in which the human and AI could complete the task.

There are benefits to simple basic statements, as well as more detailed statements that offer measurable insight in relation to the outcome. Additional detail if beneficial if it directly connects to required assessment criteria (e.g. criteria requires accuracy then the intersection detail explains how accuracy is demonstrated).

Finally, using these statements:

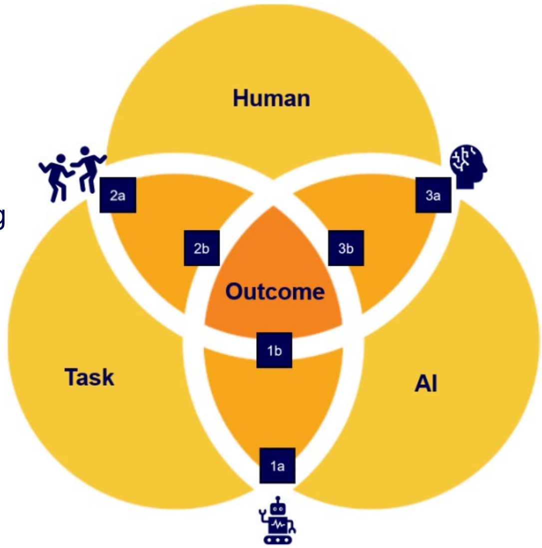
8. Define the relational connection for each alphanumeric position (i.e. human x task intersection (2a, 2b)). This can be done in any order. Consider how each intersection shifts the process or method of achieving the outcome; how is the criteria that evidences the outcome then demonstrated? This will aid in defining appropriate skills, behaviours, or evidence to support assessment.

Step 8 might reveal that AI technical capabilities have changed how you qualify a quality outcome (e.g. because AI increases speed of process, makes steps redundant, allows for additional options). In instances where AI can create a quality outcome, assessment methods will likely require students to focus on process e.g. reverse engineering to explain what constitutes quality outcome, purposefully generating errors to act as assurers etc.

Once this is complete, reflect and decide on the indicated alphanumeric relational connection that best reflects current/future professional expectations while maintaining discipline criticality. Now, use the defined statements and material to help write or refine your assessment approach and instructions for your students.

AI Assessment Venn: A Simple Analogy

Substituting a focus on AI to include broader technology, a simple analogy is making a meal. To create a meal there are three key elements: the chef (Human), the kitchen appliances (AI), and the recipe (Task) that produce a final dish (Outcome). Measurable aspects of the dish quality could include taste and nutrition, certain ingredients, plating, and texture. There are three main ways Human/AI/Task can interact:



1a
1b

Automated (Least human) – Using a microwave and heating a microwave meal

1a A microwave meal is used and is heated according to default machine pre-heating.

1b The human adjusts the timing, power settings, based on preference/experience. They check on the meal during the heating process.

2a
2b

Non-automated (Least AI) – Traditional cooking methods

2a The human prepares and cooks the meal manually, selecting ingredients from local grocers, using no electric appliances. They may be replicating traditional methods – e.g. stove, mortar and pestle

2b The human uses basic cooking technologies beyond traditional methods e.g. pressure cooker, rice cooker, electric mixer, or food processor.

3a
3b

Human and AI (Co-operative) - Takes advantage of modern tools

3a Using smart appliances to help during preparation. The human may modify the recipe and process because of appliance use, add steps, spend additional time on plating or customisation of the final dish

3b Using smart appliances throughout the process from preparation, cooking, and finishing. This might involve a smart fridge for identifying ingredients and suggesting recipe to using a Thermomix.

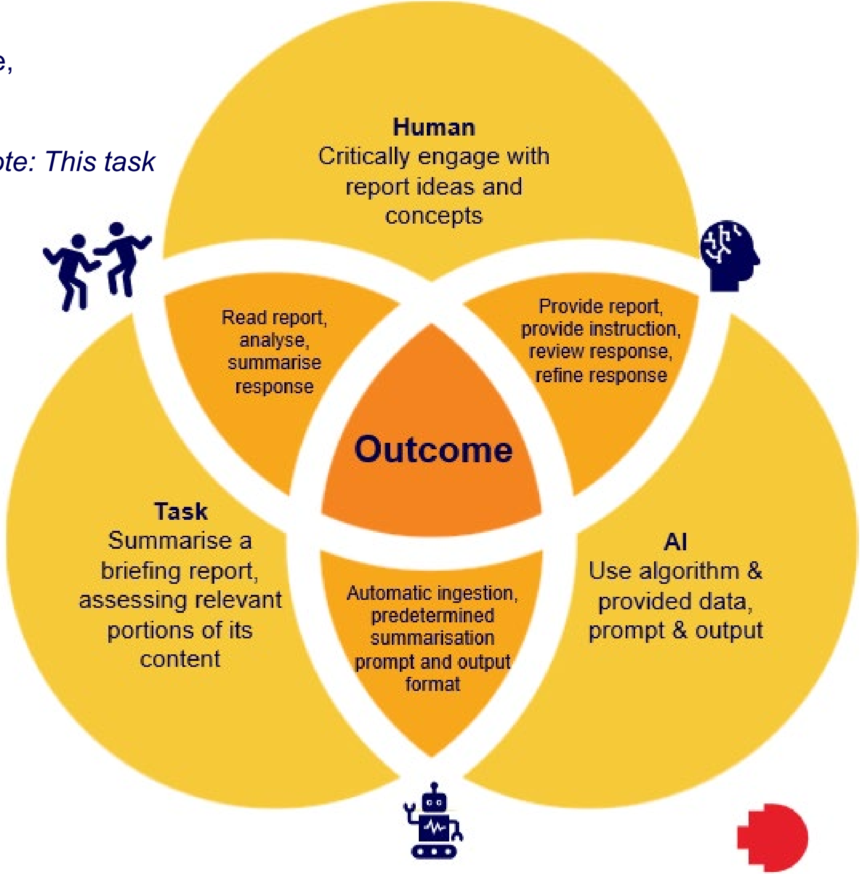
The key insight is that the Task (recipe) is designed to achieve the desired Outcome (dish), and the decision needed relates to which combination of human effort and AI tools is appropriate for learning. Just as some cooking skills require learning to do things by hand while others benefit from using modern tools, different learning outcomes might require different levels of AI involvement. This is entirely influenced by contextual factors – especially the discipline, technology capability, and social expectations.

AI Assessment Venn: Detailed Example

The following is an example of discipline generic Learning Outcome mapped against the Venn with a basic task and genAI. This is not a prescriptive example, and there are various approaches that could fit.

Outcome: Analyse industry communication formats to deliver insights on practice, with the ability to reflect on their potential strengths and weaknesses.

Task: Summarise a briefing report, assessing relevant portions of its content. (*Note: This task would be framed in the context of relevant instructions and details*).



Automated (Least human)

1a

1a The only human is that which trained the genAI and its dataset

The student uses an AI tool with a preconfigured prompt or setting to generate the summary and assessment of the industry communication. This AI tool may be considered reliable and useful for undertaking quick analysis. The tool is appropriately referenced and acknowledged.

1b

1b Incorporating some human in-the-loop to review output and conduct assurance

The student uses an AI tool integrated in generic applications like Microsoft and creates a custom prompt that they refine to guide the analysis. They review the output, make edits and fix identified errors in logic. The student acknowledges the use of AI and provides the prompt and initial output with their submission.

AI Assessment Venn: Detailed Example (continued)

Non-automated (Least genAI)

2a The human completes the task with no use of genAI

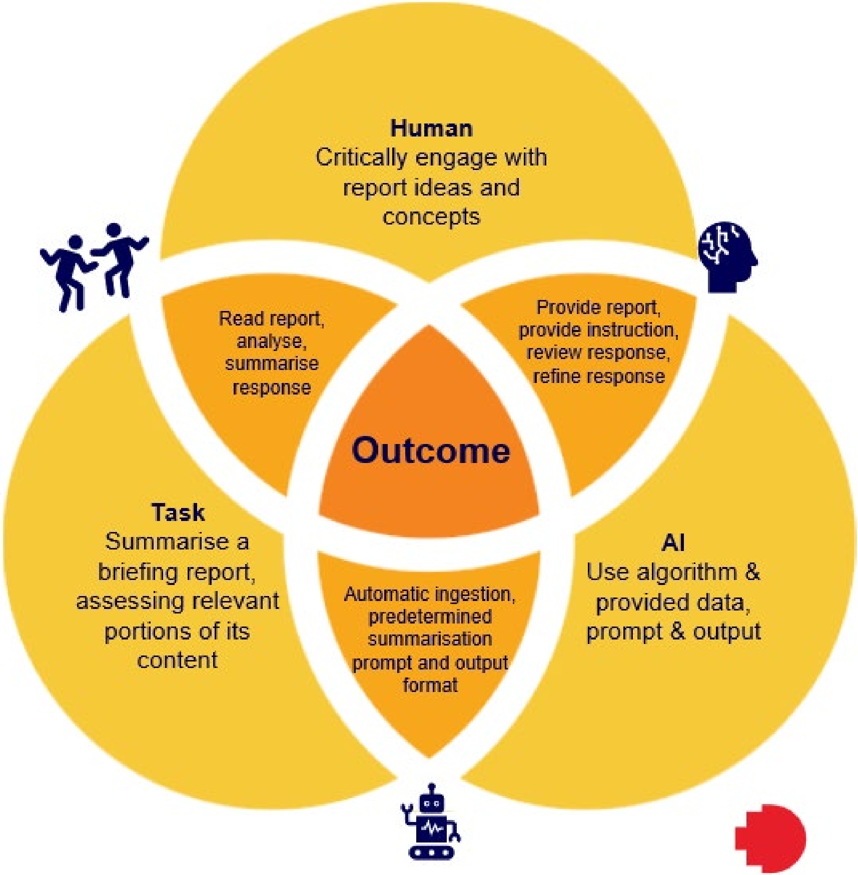
2a

The student completes the task and does not utilise AI. They may do this through in-class written response, or through interactive oral assessment methods to ensure academic integrity.

2b

2b The human completes the task but uses genAI for non-primary assessed components (e.g. brainstorming, grammar or editing) – this may be the result of genAI being integrated into standard tools (e.g. Microsoft, Adobe, GitHub)

The educator and students begin the task in class, exploring how to write or develop effective summaries by producing drafts, discussing what points may be of interest and relevant forms of evidence required to verify their work. The appropriate use of AI is clearly discussed. The students then develop their work and produce a final submission, requiring them to integrate multiple forms of evidence such as references to relevant academic articles, case studies, and reflection. Students use AI to assist editing and grammar, which they acknowledge in a statement as part of their submitted assessment.



AI Assessment Venn: Detailed Example (continued)

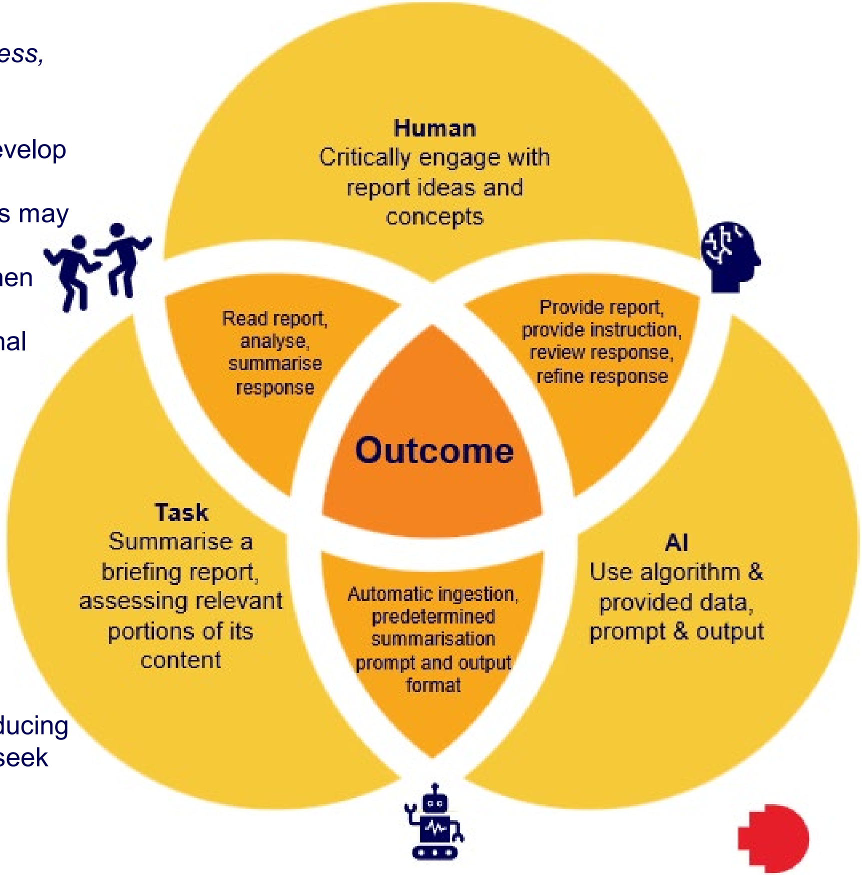
Human and genAI (Co-operative)

3a *3a The human and genAI must co-op to achieve outcome but only during process, not the final outcome*

The educator and students begin the task in class, exploring how to write or develop effective summaries and identifying issues in their current drafts through peer exchange activities. The educator keeps these drafts. They discuss what points may be of interest and relevant forms of evidence required to verify their work. The educator explains that students should create a draft using a genAI tool, and then critically review the draft and iterate on it to develop a better submission with evidence. The students are required to submit both the genAI draft and their final work, to allow the educator to determine the degree by which the students meaningfully iterated and improved their level of critical engagement.

3b *3b The human and genAI must co-op to achieve the outcome (inclusive of process and final artefact)*

The educator and students begin the task in class, exploring how to write or develop effective summaries and identifying issues in their current drafts through peer exchange activities. The educator keeps these drafts. They discuss what points may be of interest and relevant forms of evidence required to verify their work.
The educator indicates a few different ways in which genAI could assist in producing a summarised briefing report and assessment. They also discuss the need to seek evidence, and what tools might help with this. Students then complete the assessment, provide appropriate referencing and acknowledgement of AI, and explain how they used it to develop summaries that met the criteria discussed.



Appendix 1: Primary and Non-Primary Components Examples

Determining primary and non-primary components depends on the outcome and task. The following table provides some illustrative examples but should not be interpreted as a guide.

Definition		**Primary components are the essential elements that directly demonstrate achievement of the learning outcome, requiring students to show their understanding, critical thinking and capability**	**Non-primary components are supporting elements that facilitate the demonstration of learning, they help with task completion but aren’t central to proving competency.**
Examples	**Marketing Analysis**	Quality of analysis, logic of recommendations, application of theory, evaluation of market condition.	Grammar and spelling, document formatting, basic data compilation, reference formatting.
	Critical analysis essay	Quality of argument development, critical evaluation of sources, synthesis and connection of sources, original insights and interpretation	Grammar and spelling, citation formatting, initial source summaries, document structure.
	Laboratory report on scientific experiment	Experimental design decisions, data interpretation, analysis of results, scientific reasoning, discussion implications.	Data entry and tabulation, graph formatting, standard methodology description, literature review summary
	Design portfolio for complex problem/concept	Design thinking process, problem-solving approach, user research insights, design decisions and rationale, iteration based on feedback.	Initial mock-up generation, technical documentation, basic wireframes, style guide compliance.

References

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