



# The Next Era of Assessment

A Global Review of AI in  
Assessment Design

In partnership with **» Pearson**



## Foreword



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It is our pleasure to release this report, developed in partnership with Pearson.

Education is one of the first industries to be globally impacted by AI in a way that can no longer be ignored. This disruption is not theoretical—it is present, accelerating, and already shaping how students learn, how faculty teach, and how institutions operate.

We believe a fundamental shift is now underway.

In our Global AI Faculty and Student Surveys, we heard loud and clear: AI is transforming not only what students learn, but how we assess their progress. This report builds directly on those insights. For the first time, we map practical and usable ways for rethinking assessment in an AI world.

Assessment must evolve—not just to stay ahead of academic integrity concerns, but to reflect how students will think, solve, and create alongside AI tools in the real world. The three assessment types introduced—AI-Free, AI-Assisted, and AI-Integrated—offer a structured way forward.

We hope this briefing supports institutional leaders, faculty, and instructional designers in building more resilient, forward-thinking approaches to assessment. A full Executive Briefing, including additional case studies and design resources, is available to DEC members.

As always, we thank our members and global collaborators for contributing their time, expertise, and insights to this work. Please let us know how this report informs your assessment strategies—and what you are experimenting with on the ground.



Daniel A. Bielik



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## Executive Summary

In response to the challenges and opportunities introduced by AI, assessments need significant redesign—not only to remain valid and effective, but also to unlock the new potential AI offers.

This joint report by the Digital Education Council and Pearson outlines a practical path forward. This report provides the first comprehensive review of how educators worldwide are redesigning assessment with AI.

Drawing on 101 global case studies, it identifies two dominant approaches to AI-Integrated assessment:

- AI to Enhance Traditional Assessment, where AI supports core disciplinary learning
- AI as the Key Object of Study, where the focus is on building students' AI literacy

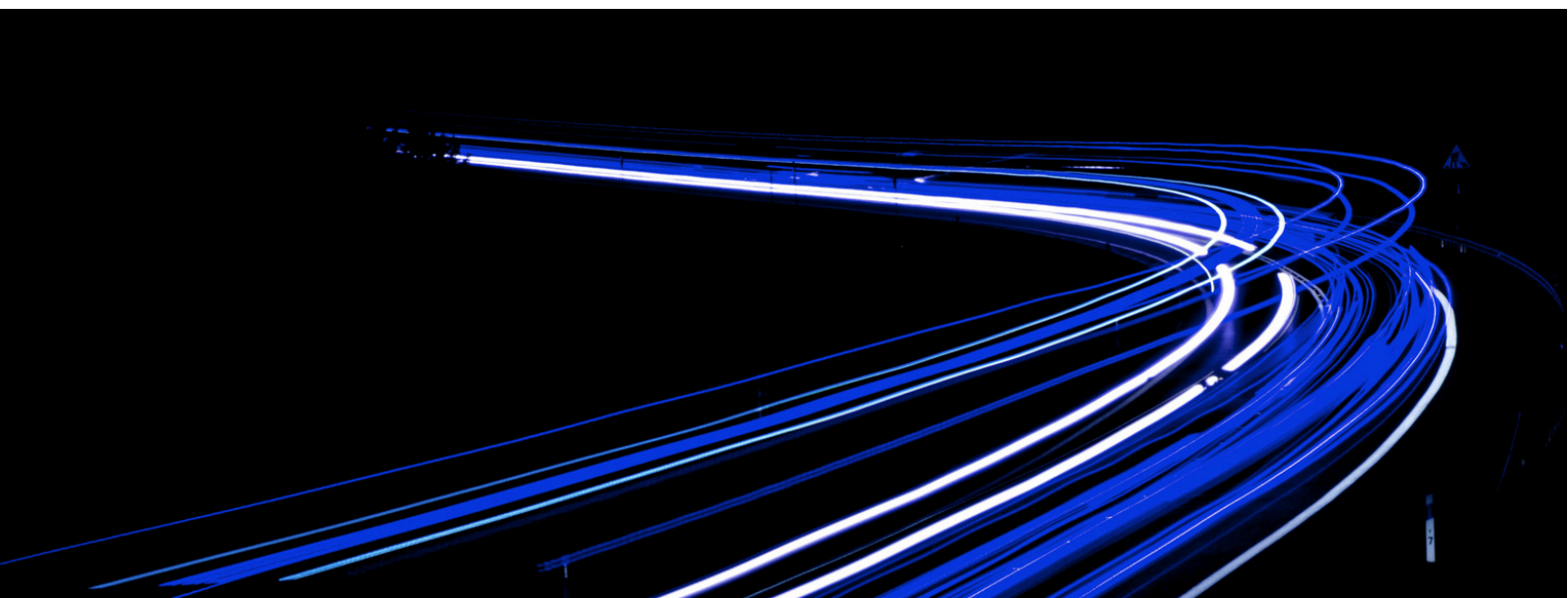
Across these two approaches, this report outlines 14 emerging AI-Integrated assessment design methodologies. Each is mapped to specific learning outcomes and AI competencies such as prompt design, AI output evaluation, and AI ethics.

As student familiarity with AI grows, future innovation is expected to focus increasingly on enhancing traditional assessments with AI as a supportive tool.

The report begins by examining AI's impact across the five stages of the assessment cycle, then categorises current assessment practices into three types—AI-Free, AI-Assisted, and AI-Integrated—based on learning goals and AI involvement.

It further introduces AI-Resilience as a baseline design principle for all assessments, encouraging structural assessment redesign rather than reliance on student compliance. A dual-priority approach is also proposed, urging institutions to balance the development of core human skills with AI-related competencies.

Grounded in global case studies, this report provides a practical guide for educators to rethink and redesign their assessments, building AI-resilient assessments and preparing students for an AI-driven future.





# Impact of AI on Assessment in Higher Education

AI is transforming higher education, and assessment sits at the heart of this disruption. According to the Digital Education Council Global AI Faculty Survey 2025, 54% of faculty believe that current student assessments require significant change, and one in two faculty members say assignments should be redesigned to be more AI-resistant.

The conversation around AI in assessment must go beyond concerns about academic integrity. At its core, assessment is about guiding students to develop essential skills and evaluating how well they have mastered them. AI holds powerful potential to enhance this process — helping

educators better support skill development, achieve learning outcomes, and more effectively assess students' mastery of those outcomes.

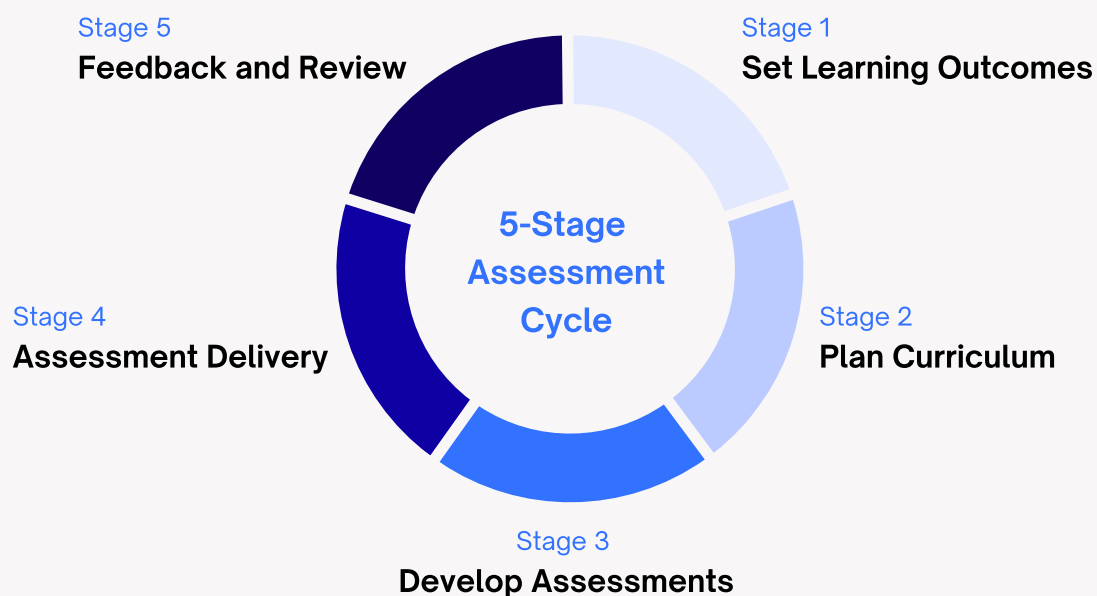
As a result, instructors today face a dual challenge:

- Redesign existing assessments to maintain validity in the AI era, ensuring they can support and measure what they are intended to.
- Explore new opportunities to integrate AI meaningfully into assessment, using it as a tool to enrich student learning, not just a threat to manage.

## Five-Stage Assessment Circular Process

The impact of AI on assessment can be better captured by unfolding the assessment cycle, which can be broadly divided into five key stages.

**Figure 1.** Five-Stage Assessment Circular Process



**Table 1.** Assessment Cycle Impact Measurements

Stage	Description
<b>Stage 1</b> <b>Set Learning Outcomes</b>	Define clear, measurable goals for what students should know and be able to do by the end of the course.
<b>Stage 2</b> <b>Plan Curriculum</b>	Organise course content, assessments, and learning experiences to help students achieve the intended outcomes.
<b>Stage 3</b> <b>Develop Assessments</b>	Create assignments, exams, and criteria to effectively measure student progress toward learning objectives.
<b>Stage 4</b> <b>Assessment Delivery</b>	Implement the assessment process, supporting student participation and maintaining the integrity of assessment responses.
<b>Stage 5</b> <b>Feedback and Review</b>	Gather feedback and systematically review assessment tasks to improve their effectiveness, clarity, and alignment to learning outcomes.

## Understanding the Impact of AI at Each Assessment Stage




The impact of AI on each assessment stage can be examined by asking two key questions:



1. *What is now possible because of AI?*
2. *What must be adopted in reaction to AI?*

Below are key possibilities introduced by AI at each stage of the assessment process, along with the corresponding adaptations needed (list is not exhaustive).



**Table 2.** Possibilities of AI and Adaptations Required

	What is now possible because of AI?	What must be adapted in reaction to AI?
 Stage 1 <b>Set Learning Outcomes</b>	<p>AI can analyse large data sets such as labour market data and skill frameworks to identify skills gaps and inform relevant, up-to-date learning outcomes.</p> <p>By automating routine tasks, AI enables students to dedicate more time to higher-order cognitive work—allowing assessments to focus more on critical and complex skill development.</p>	<p>As AI becomes an expectation in the workforce, assessments should include AI-related competencies such as AI output evaluation, and responsible AI use.</p> <p>Learning outcomes should distinguish between skills that must be developed independently and those that can be enhanced through the use of AI.</p>
 Stage 2 <b>Plan Curriculum</b>	<p>AI can generate or suggest curriculum maps and sequencing based on intended outcomes.</p> <p>AI can assist in designing personalised learning pathways based on student profiles or learning analytics.</p>	<p>Curriculum planning should consider when and how students will be allowed, encouraged, or restricted in using AI tools in assessment throughout the course.</p> <p>Curriculum should include opportunities for students to learn how to use AI tools effectively, critically, and ethically.</p> <p>The curriculum should be designed to ensure students develop both essential human skills and AI-related skills.</p>
 Stage 3 <b>Develop Assessment</b>	<p>AI can generate assessment materials such as quizzes, case studies, and rubrics.</p> <p>AI can be part of the assessment design by acting as a writing tool, simulator, or reflection guide.</p> <p>Integrating AI into assessments can increase authenticity by mirroring real-world scenarios</p>	<p>Assessments should be restructured to minimise students' reliance on AI and ensure authentic student work.</p> <p>There is a growing need to shift from output-focused tasks to those that assess process and reasoning. Rubrics should be updated to reward originality, critical analysis, and effective AI use.</p>

	What is now possible because of AI?	What must be adapted in reaction to AI?
 <p>Stage 4 <b>Assessment Delivery</b></p>	<p>AI can provide real-time feedback during assessments to guide student improvement.</p> <p>AI can proctor and monitor exams.</p> <p>Oral or scenario-based assessments can be enhanced with AI “role-play” or live Q&amp;A, allowing students to demonstrate skills in unpredictable, real-world-like exchanges.</p>	<p>Instructors should clearly communicate when and how AI can be used for each assessment.</p> <p>In-class or live activities may be needed to ensure integrity in assessments.</p> <p>Delivery methods may require ways to capture students’ process of completing the assignments, not just the final product.</p>
 <p>Stage 5 <b>Feedback and Review</b></p>	<p>AI tools can assist in grading and offer personalised feedback.</p> <p>AI can perform large-scale analysis of assessment data and identify areas of confusion, providing improvement suggestions for instructors.</p> <p>AI can generate summaries of class performance and suggest improvements to assessment design.</p>	<p>Regularly review and update assessments to ensure that, as AI evolves, the assessments continue to be valid and AI-resilient.</p>



## Rethinking Assessment in the Age of AI

In the age of AI, assessment design requires careful consideration at multiple levels—from individual tasks to the overall assessment portfolio across a course. Three key dimensions guide this process:

**Figure 2.** Three Dimensions of Rethinking Assessment in the Age of AI

### Assessment Type

*What role should AI play in completing individual assessment tasks?*

Determine whether an assessment should be AI-Free, AI-Assisted, or AI-Integrated, based on the specific learning outcomes and the extent to which AI use supports or undermines them.

### Assessment Design Principle

*How can we ensure all assessments remain valid and reliable in the presence of AI?*

Once the role of AI is defined, apply appropriate AI-resilient design strategies to maintain the authenticity and rigour of each task.

### Assessment Portfolio

*How can we combine different types of assessments to support both foundational and future-proof AI skills?*

At the course level, blend AI-Free, AI-Assisted, and AI-Integrated assessments intentionally to ensure students are both challenged to demonstrate unaided thinking and equipped to collaborate effectively with AI tools.

# Three Assessment Types

In response to the opportunities and challenges introduced by AI, three types of assessment practices have emerged in higher education — AI-Free, AI-Assisted, and AI-Integrated assessments.

Each serves a distinct purpose and focuses on different aspects of student learning. These approaches all play an important role in a balanced and future-ready assessment strategy.

**Table 3.** AI-Assessment Classification

Level	Intended Usage	Description
<b>AI-Free Assessment</b>	This type of assessment is intentionally designed to be completed without AI assistance.	The assessment’s objectives, competencies, and design will inherently exclude or minimise AI, focusing on students’ unaided thinking and foundational skill development.
<b>AI-Assisted Assessment</b>	Students may use AI for limited, specific tasks under clear boundaries (e.g. brainstorming, outlining).	The assessment’s objectives, competencies, and structure allow AI as a supportive tool, encouraging basic AI use for assistance or feedback while ensuring student-led learning remains central.
<b>AI-Integrated Assessment</b>	Purposefully embed AI tools as part of the learning and assessment experience.	The assessment’s objectives, competencies, and prompts require students to meaningfully engage with AI as a core part of the task, including applying, critiquing, and reflecting on AI within their discipline.

## Featured Insights

In his article **Rethinking Assessments**, Professor Sean McMinn, Director of the Center for Education Innovation at the Hong Kong University of Science and Technology, introduces a five-step tool designed to help instructors evaluate their current assessments. The tool guides educators through reflection using three 2x2 grids, each examining different dimensions such as cognitive demand, AI leverage potential, required human agency, and cognitive offloading risk.

Instructors can use this framework to determine the most appropriate level of AI involvement in their assessments—AI-Free, AI-Assisted, or AI-Integrated.

McMinn, S. (2025). Rethinking assessments. <https://www.linkedin.com/pulse/rethinking-assessments-sean-mcminn-qoevc/>



# AI-Resilience as a New Baseline Design Principle

AI-resilience is emerging as a key design principle to protect the validity and integrity of assessments across all types. An AI-resilient design ensures that core learning outcomes cannot be easily outsourced to AI—not by relying on students to comply— but by thoughtfully creating conditions and structures that make it hard for students to use AI to complete the core

learning tasks. Achieving AI-resilience requires more than just updated rules or technologies—it requires structural redesign of assessments (Corbin et al., 2025). A variety of innovative strategies can help instructors restructure their assessments to achieve AI-resilience. Emerging examples are outlined in the following table.

**Table 4.** Strategies to Restructure Assessments to be AI-Resilient

Strategy	Description	Example
<b>Keep Core Human Tasks in Class</b>	Split assessments into parts—assign AI-permissible tasks for outside class, but keep critical thinking, discussion, and interpretation in structured, supervised environments.	Students brainstorm and draft with AI at home, but present arguments and respond to questions live in class.
<b>Shift Focus from Output to Process</b>	Assess the reasoning, planning, and decision-making that leads to the final outcome, not just the outcome itself. Encourage metacognitive engagement.	Students log and reflect on AI interactions that shaped their work, or include justification for their solutions in the final submission.
<b>Embed Checkpoints &amp; Traceable Development</b>	Introduce structured milestones, such as intermediate submissions, live discussions, feedback loops, or planning artefacts, to demonstrate students' incremental thinking.	Host peer discussion and feedback sessions in class and require students to revise their work based on the feedback.
<b>Validate at Unit-Level, Not Task-Level</b>	Acknowledge that not all assessments can be fully AI-resilient. Instead, validate students' learning across a chain of interconnected assessments within a unit or course. Each builds on previous work in a way that is contextual to the student.	<p>Students develop a final product over four lessons—starting with concept generation and ending with a final interactive presentation.</p> <p>Each stage requires students to perform a different task building on their earlier work. Validity comes from the coherence and progression across the four lessons, not any single task.</p>

Corbin, T., Dawson, P., & Liu, D. (2025). Talk is cheap: why structural assessment changes are needed for a time of GenAI. *Assessment & Evaluation in Higher Education*, 1–11. <https://doi.org/10.1080/02602938.2025.2503964>

# Designing Assessment for Human and AI Competencies: A Dual-Priority Approach

At the course level, instructors should ensure their assessment portfolio supports both human competencies and AI-related skills. Building on the ‘Two-Lane Approach’ developed by Liu and Bridgeman (2023), the Digital Education Council proposes a Dual-Priority Approach that helps

instructors intentionally balance two complementary goals across their assessments.

Each of the three assessment types—AI-Free, AI-Assisted, and AI-Integrated—can serve different purposes within these two priorities.

Figure 3. Dual-Priority Approach in Assessment Design

## Priority 1

### Assuring Human Competency

Develop foundational knowledge, critical thinking, discipline expertise, and unaided skills.

## Priority 2

### Developing Human-AI Collaboration Skills

Build students’ competencies to use AI tools effectively and ethically. Support formative and authentic assessments that mirror future workplace demands.

Table 5. Summary of Supporting Types

Assessment Type	Priority 1: Human Competence	Priority 2: Human-AI Collaboration
AI-Free Assessment	Primary focus	Not applicable
AI-Assisted Assessment	Key focus	Build basic AI skills
AI-Integrated Assessment	Needs careful design to support human competence	Key focus

Liu, D., Bridgeman, A. (2023). What to do about assessments if we can’t out-design or out-run AI? Teaching@Sydney. <https://educational-innovation.sydney.edu.au/teaching@sydney/what-to-do-about-assessments-if-we-cant-out-design-or-out-run-ai/>



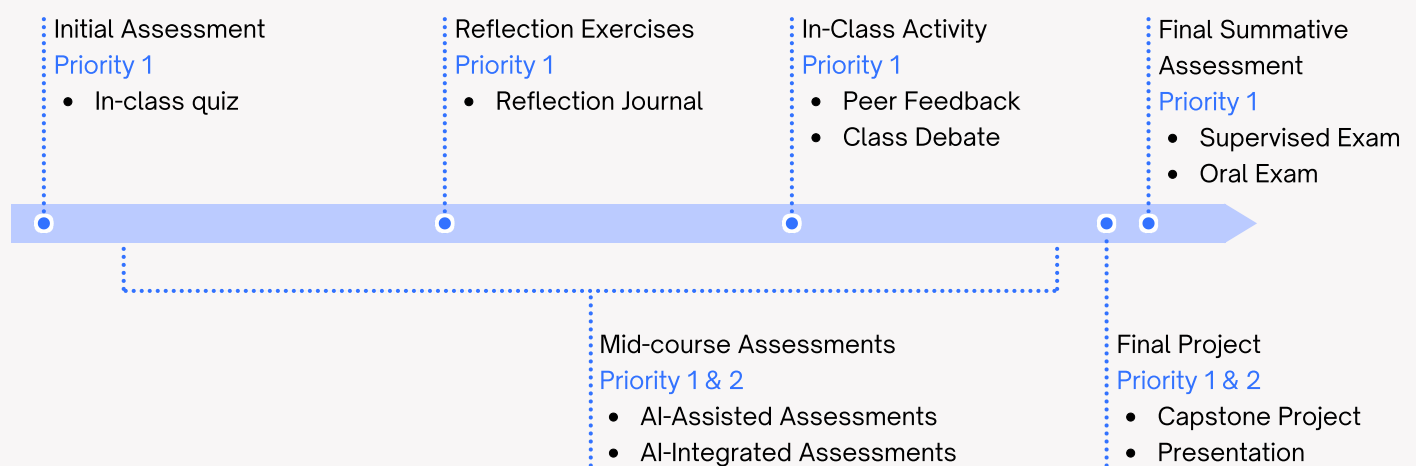
Rather than designing assessments in isolation, instructors should intentionally sequence and diversify their assessments to address both priorities across the course. For example:

- **Initial assessments** can prioritise human competencies through AI-Free tasks to establish independent thinking and core disciplinary knowledge.
- **Mid-course** and **final** projects can introduce Priority 2 by guiding students to use AI tools in

problem-solving. These should be carefully designed to ensure human contributions remain central while developing students' AI collaboration capabilities.

- **Reflection exercises** and in-class activities can be used throughout the course to reinforce Priority 1.
- **Final summative** assessments focus on Priority 1, placing a strong emphasis on unaided performance to verify student competence.

**Figure 4.** An Example of a Course Assessment Portfolio with a Dual-Priority Approach





# Practical Guide to Assessment Design in the Age of AI



## AI-Free Assessment

For assessments designed to develop or test students' unaided thinking and foundational skills—without the use of AI—the key is to structurally eliminate the possibility of AI use, rather than merely posting a "No AI" rule and hoping for compliance. The solution lies in making assessments inherently AI-resilient.

The most effective way to achieve AI-resilience is to shift from asynchronous to synchronous assessment, eliminating access to AI during task performance. Supervised exams, oral exams, in-class writing workshops, live presentations, or classroom discussions are structurally resistant to AI interference. These synchronous formats reduce the possibility of inappropriate AI use not by monitoring, but by designing out the opportunity.

However, while this approach works well for summative assessments or high-stakes validation moments, it is impractical to apply it across every assignment.

Not all assessments can or should happen in controlled environments—especially when supporting ongoing, formative learning.

Therefore, in addition to making AI physically absent from assessment, instructors can also design tasks that exploit AI's current limitations—making it difficult or meaningless for AI to complete the task on behalf of the student.

Examples include:

- **Contextualised Application Tasks:** Ask students to apply knowledge or skills to local contexts, current events, or recent in-class discussions—contexts that are not easily accessible or interpretable by AI.
- **Process Documentation:** Require students to submit evidence of their thinking process, such as annotated drafts, planning notes, or voice memos, to demonstrate how their ideas developed over time.

## AI-Assisted Assessment

When allowing students to use AI in assessments, instructors must carefully reconsider where its use is appropriate and where it must be restricted, to ensure that AI supports—rather than undermines—the intended learning outcomes. AI can be involved at various stages of the assessment process.

This AI Usage Map outlines the key touchpoints where students may interact with AI in their assignments.

Instructors can use this map to align AI use with specific learning outcomes and decide where AI is permitted, restricted, or needs clear instructional guidance. For components of the assessment where AI use should be restricted, instructors should focus on redesigning those elements to ensure AI resilience, rather than relying on student compliance.



**Table 6.** AI Usage Map

Stage	Key AI Touchpoints
Planning Stage	<ul style="list-style-type: none"> <li>Brainstorming ideas</li> <li>Suggesting Structure</li> <li>Planning Timeline</li> </ul>
Research Stage	<ul style="list-style-type: none"> <li>Suggests key search terms</li> <li>Finding sources</li> <li>Summarising literature</li> <li>Explaining jargon</li> <li>Suggesting arguments or perspectives</li> <li>Design methodology</li> </ul>
Creation Stage	<ul style="list-style-type: none"> <li>Outlining structure</li> <li>Generating first draft</li> <li>Generating parts of the content (text, code, formula, etc)</li> <li>Making tables, diagrams, visuals, slides, audio, video</li> <li>Citing sources</li> <li>Synthesising content</li> </ul>
Editing Stage	<ul style="list-style-type: none"> <li>Rephrasing</li> <li>Grammar check</li> <li>Simulating counterarguments or alternative paths</li> <li>Fixing reference list</li> <li>Shortening or extending</li> <li>Error or bug correction</li> </ul>
Feedback and Reflection Stage	<ul style="list-style-type: none"> <li>Generating feedback</li> <li>Prompt self-reflection</li> <li>Aligning with rubric</li> </ul>

## AI-Integrated Assessment

Instructors around the world are actively experimenting with ways to integrate AI into assessment design. AI holds significant promise for transforming assessment practices by introducing new ways to assess students' learning progress, increasing relevance to real-world contexts, and enabling the development of AI-related competencies.

Based on an analysis of 101 emerging AI-Integrated assessment case studies, these practices can be broadly classified into two approaches, based on their primary learning objective:

- AI to Enhance Traditional Assessment
- AI as the Key Object of Study

Beyond meaningfully incorporating AI to support learning, instructors should also determine which parts of the assessment require students' independent work, and ensure these parts are resilient to inappropriate AI use.

Compared to AI-Free and AI-Assisted assessments, AI-Integrated assessments place greater emphasis on developing AI competencies (see Table 7 below).

**Table 7.** AI Competencies

AI Competency	Description
<b>Understanding AI Fundamentals</b>	Understand foundational knowledge of how AI systems are trained, how they operate, and where they are typically applied.
<b>AI Output Evaluation</b>	Critically analyse, verify, and improve AI-generated content (e.g., accuracy, relevance, appropriateness).
<b>Input Design and Information Quality</b>	Critically design, structure, and refine inputs (e.g. prompts and datasets) to improve the accuracy, relevance, and creativity of AI-generated outputs.
<b>AI Bias &amp; Limitation Awareness</b>	Identify potential biases, reliability issues, and limitations of AI tools, and apply strategies to mitigate them.
<b>AI Integration &amp; Application</b>	Effectively use AI tools to address domain-specific tasks, support problem-solving, and enhance workflow efficiency.
<b>AI Ethics &amp; Responsible Use</b>	Understand and apply ethical principles and consider issues such as fairness, privacy, transparency, and accountability in AI use.
<b>AI Reflection &amp; Metacognition</b>	Reflect on AI's role in the thinking, learning, or creating process, including its impact on decision-making and understanding.

## Digital Education Council AI Literacy Framework

The [Digital Education Council AI Literacy Framework](#) defines five key dimensions of AI literacy, focusing on general AI literacy for all, as well as specialised AI literacy that can be adapted to different disciplines and jurisdictions.

**Fig 5. 14** Emerging Methodologies in AI-Integrated Assessment

### AI to Enhance Traditional Assessment

**01** AI-Guided Self-Assessment & Reflection

**02** AI First, Human Revision

**03** Human First, AI Review

**04** AI-Generated Materials for Analysis

**05** AI as a Simulated Collaborator or Role-Player

**06** AI for Immersive Learning

**07** Human vs AI Work Companion

**08** AI as an Assistant

### AI as the Key Object of Study

**01** AI Output Critique & Evaluation

**02** Prompt Engineering & Process Analysis

**03** AI Ethics, Policy & Societal Impact

**04** Constructive Misuse

**05** AI as Contextual Case Study

**06** AI as an artefact

## AI to Enhance Traditional Assessment

In this category, AI is used as a tool to support students to achieve discipline-specific knowledge and skills. The assessment is still anchored in the core subject area, but AI adds value by improving the assessment process or outcomes.

**Table 8.** Emerging AI-Integrated Design Methodologies to Enhance Traditional Assessment

Methodology	Description	‘Best for’ Learning Outcomes	‘Best for’ AI Competencies
<b>01</b> <b>AI-Guided Self-Assessment &amp; Reflection</b>	Students engage with AI to test, explain, or evaluate their understanding of a concept or argument.	<ul style="list-style-type: none"> <li>Self-Reflection</li> <li>Conceptual Understanding</li> </ul>	<ul style="list-style-type: none"> <li>Input Design and Information Quality</li> <li>AI Reflection &amp; Metacognition</li> </ul>
<b>02</b> <b>AI First, Human Revision</b>	Students use AI to generate a first draft or solution, which they then refine and build upon.	<ul style="list-style-type: none"> <li>Textual/Literary Analysis</li> <li>Process Improvement &amp; Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>AI Output Evaluation</li> <li>AI Bias &amp; Limitation Awareness</li> </ul>
<b>03</b> <b>Human First, AI Review</b>	Students first complete a task independently, then use generative AI tools to review and improve their work.	<ul style="list-style-type: none"> <li>Process Improvement &amp; Evaluation</li> <li>Conceptual Understanding</li> </ul>	<ul style="list-style-type: none"> <li>AI Reflection &amp; Metacognition</li> <li>AI Output Evaluation</li> </ul>
<b>04</b> <b>AI-Generated Materials for Analysis</b>	AI produces sample materials which students then analyse, interpret, or solve.	<ul style="list-style-type: none"> <li>Quantitative/Data Analysis</li> <li>Conceptual Understanding</li> </ul>	<ul style="list-style-type: none"> <li>AI Output Evaluation</li> <li>AI Bias &amp; Limitation Awareness</li> </ul>
<b>05</b> <b>AI as a Simulated Collaborator or Role-Player</b>	Students interact with an AI that simulates a character, expert, or real-world person.	<ul style="list-style-type: none"> <li>Communication</li> <li>Self Reflection</li> </ul>	<ul style="list-style-type: none"> <li>AI Output Evaluation</li> <li>AI Integration &amp; Application</li> </ul>
<b>06</b> <b>AI for Immersive Learning</b>	Students use generative AI tools to create rich experiences that deepen their understanding of disciplinary concepts.	<ul style="list-style-type: none"> <li>Conceptual Understanding</li> <li>Creativity &amp; Innovation</li> </ul>	<ul style="list-style-type: none"> <li>AI Integration &amp; Application</li> <li>Input Design and Information Quality</li> </ul>
<b>07</b> <b>Human vs AI Work Comparison</b>	Students analyse and compare human- and AI-generated output on a shared task.	<ul style="list-style-type: none"> <li>Process Improvement &amp; Evaluation</li> <li>Self-Reflection</li> </ul>	<ul style="list-style-type: none"> <li>AI Output Evaluation</li> <li>AI Bias &amp; Limitation Awareness</li> </ul>
<b>08</b> <b>AI as an Assistant</b>	Students use AI tools as collaborators across one or more phases of a task—such as planning and brainstorming.	<ul style="list-style-type: none"> <li>Communication</li> <li>Research &amp; Investigation</li> </ul>	<ul style="list-style-type: none"> <li>AI Integration &amp; Application</li> <li>Input Design and Information Quality</li> </ul>



## 01 AI-Guided Self-Assessment & Reflection

### Description

Students engage in a structured conversation with an AI tool to test, explain, or evaluate their understanding of a concept or argument. The AI acts as a dialogic partner—asking probing questions, offering feedback, and prompting clarification. Students document the interaction, reflect on the AI's feedback, and analyse how it influenced their thinking.

### Assessment Instruction

#### 1. Instructor Prompt Design

The instructor provides students with a structured prompt that sets up the AI to guide the conversation with students.

#### 2. Student-AI Interaction

Students input the prompt into the AI tool and engage in a dialogue with the AI.

#### 3. Document Dialogue & Write Reflection

Students save the entire conversation and write a reflection paper on their interaction with the AI and what they learned.

#### 4. Class or Peer Discussion (optional)

Students discuss their AI dialogue and reflections in class or in small groups.

### Examples

#### Exploring an Argument Using Stasis Theory

1. The instructor introduces Stasis Theory and provides a structured prompt for students to use with an AI tool, which guides them through each question and evaluates their responses.
2. Students choose a topic of interest. The AI asks each stasis question in sequence, then identifies the strongest argumentative ground and explains its reasoning.
3. Students save the dialogue and write a reflection on how effectively the AI supported their learning process, how its evaluation differed from their own, how it influenced their argument, and any potential biases in the AI's output.
4. Students discuss their findings in class.

Source: Sean Meehan, Washington College

#### Concept Explanation Using the Feynman Technique

1. The instructor introduces the Feynman Technique and provides a prompt where the AI plays the role of a beginner, asks probing questions, and summarises the student's understanding at the end.
2. Students interact with the AI and explain the concept they studied. The AI asks one question at a time with around 10 questions total, challenges vague or unclear points, and provides a summary of strengths and gaps.
3. Students save and submit the full dialogue.

Source: Jamie Jirout, University of Virginia

### Best for

#### Learning Outcome

- Self-Reflection
- Conceptual Understanding

#### AI Competencies

- Input Design & Information Quantity
- AI Reflection & Metacognition

## 02 AI First, Human Revision

### Description

Students begin the assessment by using a generative AI tool to produce a first draft or solution. The student then takes over to evaluate, revise, and build upon the AI-generated content.

### Assessment Instruction

#### 1. Instruction

The instructor provides a clear task description and criteria for the AI-generated output, such as length and format.

#### 2. Students Use AI to Generate the First Draft

Students test different prompts or models to generate desired AI output.

#### 3. Human Critique & Revision

Students evaluate the AI's output, identifying errors, biases, or weak reasoning. They revise the content—either using tracked changes or redrafting—to improve clarity, accuracy, structure, or depth.

#### 4. Reflection & Submission

Students submit the AI prompt used, original AI output, the revised version, and a short reflection paper or other format, such as a video, explaining what they learned about both the topic and the AI.

### Examples

#### Editing an AI Essay with Tracked Changes

1. Students prompt an AI to write a 500-word essay on a familiar topic, intentionally producing a version that is factually inaccurate, poorly written, or stylistically weak.
2. Using track changes in a word processor, students edit the essay to improve clarity, accuracy, and logic.
3. Students annotate each revision with brief explanations and submit a one-page addendum describing the prompts used, common issues found, and reflections on AI writing behaviour.
4. Students submit the original essay, edited version, and addendum.

Source: Sarah Newman, metaLAB (at) Harvard

#### Revising AI-Generated R Code

1. Students prompt a generative AI tool to write R code for a nested pie chart using the diamonds dataset, restricted to the tidyverse package.
2. After 25–30 minutes of working with AI, students submit the best plot they could generate. Most plots are incorrect, highlighting key misunderstandings.
3. Following the instructor's explanation of the correct coding structure, students rework their code manually to produce the accurate chart.
4. Students then reflect on which parts the AI handled well, where it struggled, and what they learned about coding and AI from the process.

Source: Rich Ross, University of Virginia

### Best for

#### Learning Outcome

- Textual/Literary Analysis
- Process Improvement & Evaluation

#### AI Competencies

- AI Output Evaluation
- AI Bias & Limitation Awareness

## 03 Human First, AI Review

### Description

Students first complete a task independently, then use generative AI tools to review and improve their work. AI acts as a second-opinion reviewer, suggesting revisions, identifying gaps, or raising questions. Students critically assess the AI feedback, decide which suggestions to adopt or reject, and reflect on how AI input shaped their final outcome.

### Assessment Instruction

#### 1. Complete the Task Independently

Students first complete a task—such as writing an essay or coding a program—without using AI. This ensures foundational understanding is demonstrated before seeking AI input.

#### 2. Students use AI for feedback

Once the work is complete, students input it into a generative AI tool for review and feedback. Prompts may focus on error detection, improvement suggestions, or content critique.

#### 3. Revise and Evaluate Suggestions

Students review the AI's feedback critically and revise their original work. Edits should be made with tracked changes, consultation with instructor, or submitted alongside the original for comparison.

#### 4. Reflection & Submission

Students write a reflection paper on the AI use—what it helped with, where it fell short. Students submit the original version, AI feedback, revised version, and their reflection.

### Examples

#### Revising a Draft with AI Feedback

1. Students write an essay draft without using AI.
2. Students input their draft into Copilot or ChatGPT to request revision suggestions or feedback.
3. Students evaluate the AI-given feedback and suggestions, consulting with their instructors before editing based on the AI's suggestions. Students copy their original draft onto a new page and apply edits, keeping the old version intact.
4. Students submit both old and revised drafts.

Source: Jun Wang, University of Virginia

#### Improving Code Reliability with AI Input

1. Students independently write a Python program (e.g. Rock-Paper-Scissors game) with required features such as user input and randomisation.
2. They submit their code to ChatGPT and ask it to identify edge cases or failure points.
3. Students compare the AI's list of edge cases with their own, fix the program accordingly, and test it against both sets.
4. They submit the original code, ChatGPT feedback, their revised code, and a 200-word reflection on how ChatGPT supported or fell short in improving code reliability.

Source: Sebastian Rodriguez, metaLAB (at) Harvard

### Best for

#### Learning Outcome

- Process Improvement & Evaluation
- Conceptual Understanding

#### AI Competencies

- AI Reflection & Metacognition
- AI Output Evaluation

## 04 AI-Generated Materials for Analysis

### Description

AI produces sample materials for analysis, such as case studies, scenarios, or artefacts which students then apply their disciplinary analysis.

### Assessment Instruction

#### 1. Generate Sample Material Using AI

Students (or the instructor) use a generative AI tool to create sample texts, problem solutions, or responses related to the course content.

#### 2. Students Apply Disciplinary Analysis

Students analyse the sample content using frameworks, criteria, or conventions from the discipline. Students justify their analysis and evaluation with reference to course concepts, with options to rewrite AI content.

#### 3. Submission

Students submit the AI samples, their analysis and evaluation, and/or a revised version of AI content (optional), depending on the assessment design.

### Examples

#### Analysing AI Imitation of Literary Style

1. Students prompt a generative AI tool to write a passage imitating the style of a well-known author (e.g. Virginia Woolf or Cormac McCarthy).
2. They identify five hypotheses explaining specific stylistic choices made by the AI, referencing sentence structure, diction, tone, and grammar.
3. Students compare their observations to published analyses of the author's style, and write a 500-word analysis discussing where the AI succeeded or failed in emulating it.

Source: Chris Lott, University of Washington

#### Evaluating Reasoning in AI-Generated Answers

1. The instructor provides a complex problem (e.g. ethical dilemma or scientific question). Students use AI tools to generate multiple answers with reasoning.
2. Students select a diverse sample of responses—some correct, some partially correct, some incorrect.
3. Students assess which responses are correct and why, and if needed, provide a corrected version.

Source: Robert Talbert, Grand Valley State University

### Best for

#### Learning Outcomes

- Quantitative/Data Analysis
- Conceptual Understanding

#### AI Competencies

- AI Output Evaluation
- AI Bias & Limitation Awareness



## 05 AI as a Simulated Collaborator or Role-Player

### Description

Students interact with an AI that simulates a character, expert, or real-world stakeholder—such as a patient, author, historical figure, or professional. The AI takes on a predefined role in a dialogue, allowing students to practise communication, decision-making, empathy, or interview techniques.

### Assessment Instruction

#### 1. Define the Role and Purpose

Students identify or are assigned a scenario in which they will interact with an AI acting in a specific role. The scenario may simulate a clinical situation, historical context, or interview.

#### 2. Engage in Role-Play with AI

Students prompt the AI to take on the defined role and begin the interaction, practising conversational strategies such as follow-up inquiries and active listening.

#### 3. Reflect and Document Insights

Students save the transcript (or voice recording, if applicable) and write a reflection on the interaction.

### Examples

#### Triage Simulation for Nursing Students

1. Students select a clinical triage scenario (e.g. patient with worsening chest pain) and initiate a role-play with an AI acting as the patient.
2. They conduct the conversation—ideally via voice—to practise verbal telephone communication and clinical judgement.
3. After the exchange, students reflect on their communication skills, decision-making, and areas for improvement.
4. They then ask the AI for feedback on their performance and include both reflection and transcript in their submission.

*Source: Stacey Hobbick, University of North Florida*

#### Rehearsing Interview Techniques with a Simulated Expert

1. Students identify someone they will later interview (e.g. an elder or professional) and write initial questions based on research.
2. They conduct a practice interview with an AI acting in the target role, asking follow-up questions and observing possible conversation paths.
3. Based on the AI rehearsal, they revise their questions for clarity, depth, or tone.
4. After conducting the real interview, students compare the AI and real experiences, noting how the simulation helped or fell short.

*Source: Katharine Welsh, University of Chester*

### Best for

#### Learning Outcome

- Communication
- Self-Reflection

#### AI Competencies

- AI Output Evaluation
- AI Integration & Application

## 06 AI for Immersive Learning

### Description

Students use generative AI tools to create rich experiences that deepen their understanding of disciplinary concepts. By crafting simulations, environments, characters, or narratives, students are transported into the world of the content—whether historical, scientific, or conceptual. The goal is to promote deeper engagement, creative exploration, and personal connection to complex ideas using AI as a storytelling or visualisation partner.

### Assessment Instruction

#### 1. Define the Concept, Scenario, or Topic

Students choose or are assigned a topic (e.g. historical event, scientific concept, future scenario) and specify a framing or angle that will guide the immersive experience.

#### 2. Generate Immersive Material with AI

Students use generative AI tools (text, image, or code-based) to co-create immersive elements—such as first-person narratives, visual scenes, fictional worlds, or conceptual metaphors. Students refine prompts and iterate on their AI output.

#### 3. Reflect and Present

Students present their immersive artefacts alongside a short reflection explaining their design choices, learning insights, and how the use of AI deepened their understanding.

### Examples

#### Immersive Historical Narrative

1. Students choose a major historical event (e.g. French Revolution) and select a framing perspective (e.g. adolescent artisan).
2. They input the prompt sample provided by instructors or of their own to AI tools to generate a detailed first-person narrative of life during that time. The narrative includes key figures, daily routines, sociopolitical dynamics, and sensory detail rooted in historical fact. Students also create an AI-generated image depicting themselves in the setting.

*Source: Tim Mousel, Lone Star College*

#### Visualising Abstract Concepts

1. Students select a key term or concept (e.g. resilience, entropy, colonialism) and generate an AI-created image representing it.
2. They write a short essay interpreting the image and its connection to the chosen concept.
3. After refining their understanding, they revise their prompt to produce a more accurate or powerful image.
4. Students present both images and reflect on how visualisation enhanced their grasp of the concept.

*Source: University College London*

### Best for

#### Learning Outcome

- Conceptual Understanding
- Creativity & Innovation

#### AI Competencies

- AI Integration & Application
- Input Design and Information Quality

## 07 Human vs AI Work Comparison

### Description

In this assessment, students analyse and compare human- and AI-generated output on a shared task. Sometimes students complete the task themselves and then prompt AI to do the same; in other cases, they are given a human response and an AI response to compare. The goal is not to evaluate AI per se, but to use the comparison as a lens to strengthen discipline-specific skills.

### Assessment Instruction

#### 1. Select or Create Comparison Materials

Instructors either assign a task for students to complete and then replicate using an AI tool, or provide both a human-generated and AI-generated output for students to analyse.

#### 2. Conduct or Review Work

Students either perform the task independently, or study the human-generated work alongside the AI-generated version. Students then critically compare the two responses.

#### 3. Reflect

Students write a reflection paper on the differences between human and AI work, evaluating strengths, weaknesses, logic, or accuracy

### Examples

#### Financial Analysis Using DuPont Model

1. Students manually conduct a DuPont Analysis of Coca-Cola's 2022 financial data using its official 10-K report and interpret the company's financial health.
2. They then instruct an AI (e.g., Copilot) to perform the same analysis, guiding it with prompts and reviewing its step-by-step output.
3. Students compare the human and AI analyses for accuracy, depth, and reasoning quality.
4. They write a reflection on the value and limitations of using AI for financial evaluation.

Source: David Pedersen, Rutgers University–Camden

#### Critical Reading of AI vs Human Essays

1. The instructor selects a primary article along with two critiques: one written by a human and one generated by ChatGPT.
2. In class, students read the article and both critiques.
3. Students analyse the two critiques and write a reflection on the differences between human and AI rhetorical strategies, strengths and limitations, and what they learned about critical assessment.

Source: Anna Mills, Cañada College

### Best for

#### Learning Outcome

- Process Improvement & Evaluation
- Self-Reflection

#### AI Competencies

- AI Output Evaluation
- AI Bias & Limitation Awareness

## 08 AI as an Assistant

### Description

Students use AI tools as collaborators across one or more phases of a task—such as planning, researching, drafting, or refining. The assessment emphasises how students integrate AI into their workflow to improve quality, originality, or insight, while still demonstrating authorship and critical thinking.

### Assessment Instruction

#### 1. Define the Task and Identify Challenges

Students are assigned a complex task and consider where they might need support.

#### 2. Use AI Strategically During the Process

Students engage AI tools during one or more key stages—e.g., brainstorming, exploring alternate perspectives, drafting, or revising—while keeping a record of how AI assisted their process.

#### 3. Produce Final Output

Students submit their final product, integrating the insights or output developed in collaboration with AI.

#### 4. Reflect on Human-AI Collaboration

Students write a short reflection evaluating their collaboration. They consider how AI influenced their thinking, where it helped or hindered, and what they contributed as human authors.

### Examples

#### Persuasive Collaboration Showcase

1. Students identify a persuasive task they find unusually difficult.
2. They work iteratively with an AI tool to develop arguments, refine tone, and rehearse or prototype output, logging at least five AI interactions with details of prompts, output, and lessons.
3. Students present their persuasive product and explain their AI-Assisted process in a class presentation.
4. They design a rubric to evaluate the effectiveness of human-AI collaboration, based on their experience.

Source: Kiera Allison, University of Virginia

#### AI Sandwich: AI Assists in Interview Workflow

1. Students use an AI tool to brainstorm and refine a list of interview questions related to their chosen research topic.
2. They conduct real interviews with 2–3 people and gather field notes or transcripts.
3. Students ask AI to help organise the interview data into an outline, then co-write or refine an essay using AI support.
4. They adjust the essay to reflect their own conclusions and submit it with a prompt log and a short reflection on how AI contributed to or hindered the process.

Source: Jon Ippolito, University of Maine

### Best for

#### Learning Outcome

- Communication
- Research & Investigation

#### AI Competencies

- AI Integration & Application
- Input Design and Information Quality



## AI as the Key Object of Study

Here, AI itself becomes the central focus of learning and assessment. These activities aim to build students' understanding of how AI works, its limitations, risks, and societal implications. This approach contributes directly to AI literacy and critical digital competencies.

Six assessment design methodologies are emerging in this space:

**Table 9.** Emerging AI-Integrated Design Methodologies with AI as the Key Object of Study

Methodology	Description	'Best for' Learning Outcomes	'Best for' AI Competencies
<b>01</b> <b>AI Output Critique &amp; Evaluation</b>	Students critically evaluate the quality, accuracy, or bias in AI-generated content.	<ul style="list-style-type: none"> <li>Self Reflection</li> <li>Conceptual Understanding</li> </ul>	<ul style="list-style-type: none"> <li>AI Output Evaluation</li> <li>AI Reflection &amp; Metacognition</li> </ul>
<b>02</b> <b>Prompt Engineering &amp; Process Analysis</b>	Students experiment with AI prompting and reflect on how input design affects output.	<ul style="list-style-type: none"> <li>Conceptual Understanding</li> <li>Collaboration &amp; Teamwork</li> </ul>	<ul style="list-style-type: none"> <li>AI Output Evaluation</li> <li>Input Design and Information Quality</li> </ul>
<b>03</b> <b>AI Ethics, Policy &amp; Societal Impact</b>	Students explore AI's ethical, legal, and social impact through debate, reflection, or policy design.	<ul style="list-style-type: none"> <li>Self-Reflection</li> <li>Ethics &amp; Responsibility</li> </ul>	<ul style="list-style-type: none"> <li>AI Reflection &amp; Metacognition</li> <li>AI Ethics &amp; Responsible Use</li> </ul>
<b>04</b> <b>Constructive Misuse</b>	Students intentionally misuse AI to their limits to uncover flaws or biases.	<ul style="list-style-type: none"> <li>Conceptual Understanding</li> <li>Ethics &amp; Responsibility</li> </ul>	<ul style="list-style-type: none"> <li>AI Output Evaluation</li> <li>AI Ethics &amp; Responsible Use</li> </ul>
<b>05</b> <b>AI as Contextual Case Study</b>	AI is used as a lens to explore concepts within a particular academic discipline.	<ul style="list-style-type: none"> <li>Self-Reflection</li> <li>Conceptual Understanding</li> </ul>	<ul style="list-style-type: none"> <li>AI Ethics &amp; Responsible Use</li> <li>AI Reflection &amp; Metacognition</li> </ul>
<b>06</b> <b>AI as an Artefact</b>	Students design or customise their own AI tool.	<ul style="list-style-type: none"> <li>Process Improvement &amp; Evaluation</li> <li>Practical Application</li> </ul>	<ul style="list-style-type: none"> <li>AI Integration &amp; Application</li> <li>AI Ethics &amp; Responsible Use</li> </ul>

## 01 AI Output Critique & Evaluation

### Description

Students critically analyse and evaluate AI-generated output for accuracy, bias, relevance, and overall quality. The focus is on understanding why AI produces certain output and how to assess their quality.

### Assessment Instruction

#### 1. Generate AI Output

Students are introduced to a specific discipline-related topic or problem and a relevant AI tool. Students craft prompts to generate specific output (e.g., text, image) from the selected AI tool.

#### 2. Critical Evaluation & Analysis

Students evaluate the AI-generated content against predefined criteria (e.g., accuracy, reliability, bias, ethical considerations). They identify strengths, weaknesses, and potential underlying issues.

#### 3. Source Verification & Comparison (if applicable)

Students cross-reference AI-generated information with reliable external sources or compare output from different AI tools to identify discrepancies or validate claims.

#### 4. Reflection & Discuss Findings

Students reflect on the AI's performance and consider the broader implications of such AI output. Optionally, students can present their analysis, together with recommendations for responsible use.

### Examples

#### Bias and Stereotypes in AI

1. Students choose to work with either text-to-image tools or a Large Language Model.

##### 2. Version A (Text-to-Image):

Students develop prompts designed to elicit potential biases (e.g., a group of doctors preparing for surgery). They use at least three different text-to-image tools to generate images.

##### Version B (LLM):

Students prompt an LLM to write a scene in a movie script where people in specific professions interact.

3. Students analyse and discuss the gender and race assigned by AI to roles and how this reinforces or contradicts common stereotypes.

4. Students further experiment with AI to explore different stereotypes.

Source: Peter Hartley, Edge Hill University

#### Disciplinary Question Critique

1. Instructors identify a major question/challenge in their discipline, preferably with no clear solution.

2. Ask students to collaborate on developing and agreeing 5-10 criteria for assessing AI generated responses to the question.

3. Students individually write a prompt for AI to answer the question.

4. In small groups, students use their criteria to judge the responses of other students and rate the AI prompts/responses from best to worst.

5. Students write a report/reflection on the process.

Source: University College London

### Best for

#### Learning Outcome

- Self Reflection
- Conceptual Understanding

#### AI Competencies

- AI Output Evaluation
- AI Reflection & Metacognition

## 02 Prompt Engineering & Process Analysis

### Description

Students engage in the iterative process of designing, refining, and testing prompts for AI tools. The assessment focuses on analysing how variations in prompt design influence AI output and understanding the underlying mechanisms, biases, or operational logic of the AI.

### Assessment Instruction

#### 1. Initial Prompt Design

Students select or are assigned an AI tool and a specific topic. Students craft an initial prompt to generate desired output from the AI.

#### 2. Iterative Testing & Refinement

Students test their prompts, observing and logging how the AI responds to different input. Based on observations, students revise and refine their prompts to achieve more precise or revealing output.

#### 3. Process Analysis & Hypothesis Formation

Students analyse the changes in AI output across iterations, formulating hypotheses about the AI's underlying logic, training data, or limitations.

#### 4. Reflection & Communication of Findings

Students reflect on their prompt engineering process and communicate their findings through an analysis, discussion, or presentation.

### Examples

#### Playtesting AI Prompt

1. Students use ChatGPT to prompt it to follow "Rogers's rules" for active listening within a course-relevant conversational context.
2. Testing to Pass: Students "playtest" prompts with a simple, uncontroversial conversation, checking if AI consistently adheres to Rogers's rules
3. Testing to Fail: Students then test with a more difficult, unpredictable conversation, observing when AI fails to adhere to Rogers's rules.
4. Students revise prompts based on observed AI failures, repeating testing as needed.
5. Students reflect on learning about prompt crafting and active listening. This can be done through discussion or a reflection essay.

Source: Alexander Landfair, New York University

#### Many Sides of Many Coins

1. Students choose a Large Language Model (LLM) and a complex, controversial contemporary issue.
2. Students ask the LLM to outline the side of the debate they are less inclined toward.
3. Students log AI refusals, warnings, or surprises. They experiment by prompting the tool to respond to different input, such as modifying the message for different audiences. Logging all prompts and responses (3 to 5 iterations per experimental step).
4. Students analyse how the tool changes with each prompt, hypothesise why, and consider implications for online media and journalism.
5. Students write an analysis or prepare a presentation detailing their biggest findings.

Source: Dana Dawson, Temple University

### Best for

#### Learning Outcome

- Conceptual Understanding
- Collaboration & Teamwork

#### AI Competencies

- AI Output Evaluation
- Input Design and Information Quality

## 03 AI Ethics, Policy & Societal Impact

### Description

Students critically examine the ethical, policy, and societal implications of AI, particularly focusing on its benefits and risks. This type of assessment aims to develop nuanced understanding on AI's impact on society and foster responsible engagement with AI.

### Assessment Instruction

#### 1. Research & Contextualisation

Students conduct research to understand the specific ethical, policy, or societal issue related to AI.

#### 2. Critical Analysis & Justification

Students develop and justify their own informed position or proposal on the issue, using evidence-based reasoning and critical analysis.

#### 3. Reflection & Submission

Students present their analysis through a chosen format (e.g., essay, presentation, policy brief, or creative work) and reflect on the broader societal implications of the issue.

### Examples

#### Developing a Class AI Policy

1. In class, students discuss the potential impact of generative AI in education.
2. Students are introduced to three approaches for AI use in the classroom: banning, specific allowed uses, or free use with disclosure.
3. Students divide into three groups, each assigned one approach, and discuss its potential benefits and downsides.
4. After group presentations, students collaborate (using AI tools if desired) to create sample class norms for AI use, and share their ideas.
5. The whole class reflects on norms, and which norms to include in a final report. They also discuss if different classes should adopt different AI approaches.

Source: Mohsin Yousufi, metaLAB (at) Harvard

#### Critiquing AI Hype in Media

1. Students read an original news article from the AI Hype Wall of Shame website.
2. Students document the article's main ideas and key narrative about AI's capabilities or dangers.
3. Students discuss the article's main ideas, analysing how well-substantiated arguments are.
4. Students then read the critique of their chosen article from the AI Hype Wall of Shame.
5. Students engage in a second discussion, focusing on how the critique debunks myths and how AI might critique AI, and what balanced AI reporting should look like.

Source: Maha Bali, American University in Cairo

### Best for

#### Learning Outcome

- Self-Reflection
- Ethics & Responsibility

#### AI Competencies

- AI Reflection & Metacognition
- AI Ethics & Responsible Use

## 04 Constructive Misuse

### Description

Students intentionally explore the limits and vulnerabilities of AI tools by attempting to "misuse" them in a controlled, ethical context. This approach aims to deepen students' understanding of how AI can be exploited for harmful purposes, thereby fostering critical awareness of AI's potential risks and informing strategies for responsible AI use.

### Assessment Instruction

#### 1. Define the AI Tool & Task

Students select an AI tool and a specific task involving the generation of potentially misleading or harmful content.

#### 2. Attempt Misuse with AI

Students craft prompts or input to encourage the AI to generate content or achieve an outcome associated with the defined misuse, noting any AI hesitations or safeguards encountered.

#### 3. Analyse AI Output

Students critically examine the AI's output or behavior relevant to the misuse, such as persuasive elements or potential biases.

#### 4. Reflect on Implications

Students reflect on the AI's response to the attempted misuse, its effectiveness in achieving the intended negative outcome, and the broader implications for individuals and society.

### Examples

#### AI Misinformation Campaign

1. Students use a Large Language Model to write a compelling article on a false claim, designed to be part of a disinformation campaign.
2. They prompt the AI to create a 300-400 word article (e.g., "why vaccines cause autism"), including links to at least two sources to support specific claims. They note if the AI tool hesitated and how they circumvented it.
3. Students analyse strategies within the AI-generated text that make the message compelling. They also assess the credibility of the AI-referenced sources.
4. Students reflect on the implications of using AI for disinformation campaigns and how such content might influence public perception.

Source: Daniel Stanford, DePaul University

### Best for

#### Learning Outcome

- Conceptual Understanding
- Ethics & Responsibility

#### AI Competencies

- AI Output Evaluation
- AI Ethics & Responsible Use



## 05 AI as Contextual Case Study

### Description

Students use AI as a specific example or phenomenon to study broader concepts within a particular academic discipline, such as interface design and data privacy.

### Assessment Instruction

#### 1. Identify AI Case Study

Students or instructors choose an AI tool or phenomenon to serve as a relevant case study within their academic discipline.

#### 2. Apply Disciplinary Framework

Students apply relevant theories, methodologies, or analytical lenses from their discipline to examine the selected AI case.

#### 3. Formulate Disciplinary Insights

Students synthesise their analysis to articulate insights about both the AI and the discipline, highlighting new perspectives.

#### 4. Communicate Findings

Students present their findings, demonstrating how the AI case study enhances disciplinary understanding

### Examples

#### AI Interface Comparison

1. Students select chatbot and non-chatbot AI tools to study interface design.
2. They interact with each tool using a course-relevant research question, observing how interface design affects user interaction.
3. Students discuss their findings, highlighting how AI interfaces demonstrate disciplinary concepts.

Source: Jessica Yurkofsky, metaLAB (at) Harvard

#### Analysing AI Terms of Service and Data Use

1. Students select an AI tool's Terms of Service or Privacy Policy as a case study for ethics, law, or public policy.
2. They apply legal or ethical frameworks to critically examine document excerpts.
3. In groups, students annotate the document, flagging ethical dilemmas or policy implications.
4. Students reflect on how AI's policies manifest or challenge established ethical or legal principles.

Source: Autumn Caines, University of Michigan-Dearborn

### Best for

#### Learning Outcome

- Self-Reflection
- Conceptual Understanding

#### AI Competencies

- AI Ethics & Responsible Use
- AI Reflection & Metacognition

## 06 AI as an artefact

### Description

Students design, develop, or curate a tangible AI artefact (e.g., an AI chatbot). The assessment focuses on students' understanding of AI's practical application, and their critical reflection on AI's benefits, challenges, and ethical considerations within a specific context.

### Assessment Instruction

#### 1. Define Context & Purpose

Students identify a specific problem or opportunity within their field (e.g., teaching) that AI can address.

#### 2. Design AI-Integrated artefact

Students clearly define which AI tool(s) will be used, how they are integrated into the artefact's design, and develop such artefact.

#### 3. Justify & Analyse

Students articulate the objectives, expected outcomes, and added value of AI integration. They analyse their thought process, challenges, and ethical considerations in designing AI-Integrated artefacts.

#### 4. Present/Report artefact

Students present their designed artefact and a detailed report justifying their choices and reflecting on the AI's role.

### Examples

#### Designing an AI-Enhanced Educational Activity

1. Educators (in this case, they are the 'students') identify a need in their teaching practice (e.g., improving learning outcomes, content creation, or evaluation methods).
2. They design an educational activity (e.g., designing an AI-driven assessment rubric) for their course/subject that strategically uses a generative AI tool.
3. Educators write a report detailing the activity's name, learning objectives, course context, AI tool(s) used, critical purpose, pedagogical objectives, expected outcomes, and the added value of AI. They explain their design thought process, encountered limitations, and how the activity relates to course theories on AI in education.
4. They submit the report. If educators have had the opportunity to carry out the educational activity with their students before the course has concluded, they can add a section on "lessons learned".

Source: Mari Cruz García Vallejo, Universidad de Las Palmas de Gran Canaria

### Best for

#### Learning Outcome

- Process Improvement & Evaluation
- Practical Application

#### AI Competencies

- AI Integration & Application
- AI Ethics & Responsible Use

## Blended Methodology

Importantly, instructors can blend multiple assessment design methodologies to fulfil diverse learning objectives and create more layered, reflective learning experiences.

### Case study

### Assessment with Blended Methodologies

#### Challenge

The AI Pedagogy Team at MetaLab@Harvard designed an assessment that blends two methodologies—AI Output Critique & Evaluation and Prompt Engineering & Process Analysis—to help students evaluate how primary sources influence the narrative of a historical or contemporary issue while developing AI competency.

#### Investigating and Recreating AI-Generated Images

1. Students select three AI-generated images from real-world examples: one harmless, one harmful, and one in-between. They explore each image's context, how it spread, and its public impact.
2. Students write 2–3 paragraphs analysing the origin, detection, and effects of each image, reflecting on what distinguishes harmless content from disinformation.
3. Using a text-to-image AI generator, students attempt to recreate each image, refining their prompts at least three times to improve realism.
4. Students describe the tools and prompts used, challenges encountered, how realistic their images became, and what visual clues still exposed them as AI-generated.
5. Final submission includes the written analysis of the original images, recreated AI-generated images with prompt iterations, and a short reflection paper.



## Contributors

The development of this report has been made possible through the generous contributions of experts, practitioners, and institutional partners from across sectors and geographies. We are deeply grateful to all those who shared their insights, case studies, and critical feedback throughout the process.

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**Suggested Citation:** Digital Education Council, *The Next Era of Assessment*, 2025.

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