Generative AI and Assessment Matrix

Developed from discussions with Kevin Brandom, Barrie Cooper, Eleanor Hodgson, Alex Janes, Karen Kenny, Edward Mills, Kelly-Louise Preece and Annabel Watson

Some general notes and principles

- Write clear assignment briefs.
- Use formative assessment opportunities as part of the process/lead into summative assessment, asking students to respond to the formative feedback.
- Build in practice of skills and requirements of the task in the lead up to the assessment.
- Consider how you support students through the process of the assessment, and how to build in assessment of this process (i.e. the steps they have taken to develop their response to the task)
- Consider the accessibility implications of your assessment tasks.
- Address AI in your assignment briefs, and explain what is considered appropriate for that assessment task or discipline. For example: With the advent of Large Language Models such as ChatGPT and other tools for summarising information and drafting outputs, I specifically want to address their use. Any use of such tools must be properly referenced, and you must include a section in your report detailing clearly and transparently how and where you have used them — this will count towards the overall page limit. As with any source material, must be in quotation marks, and all uses must be referenced, even where material has been substantially rewritten. Failure to adhere properly to these specifications may constitute academic misconduct. Note also that unlike peer-reviewed, professionally edited and published materials, the quality and accuracy of material produced by AI tools is very variable — you are responsible for ensuring that what is written in your report is correct. (Barrie Cooper).
- Finally, alongside thinking about the specifics of your assessment in response to Generative AI, we recommend taking a more holistic approach to reviewing your assessment practice, as discussed in this video by leading assessment and feedback expert, Prof. David Boud.
<table>
<thead>
<tr>
<th>Assessment method</th>
<th>How is it susceptible to generative-AI-related misconduct?</th>
<th>Key skills being assessed</th>
<th>Consider including the following elements in your task to making them more resilient to AI-related misconduct</th>
<th>How could you use AI as part of the assignment task?</th>
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</thead>
</table>
| Essay             | Students could copy and paste AI-generated text into essays and pass it off as their own. Misconduct is more likely when tasks include:  
  - Broad and general topics  
  - Lack of specific context or personal reflection  
  - No requirement for original research or unique analysis |  
  - Critical thinking  
  - Written skills  
  - Analysis  
  - Research skills |  
  - Applying knowledge or skills to real-world problems or current events  
  - Personal reflection on experience or module content  
  - Requiring reference to specific module content i.e., key concepts  
  - Use of specific reading lists/papers that are behind a pay wall  
  - Use of commentary on or annotation of draft or plan to show process of writing and justify approach taken (e.g. why particular structure or sources were used) |  
  - Ask students to critique an AI-generated answer  
  - Ask students to reflect on the extent to which AI has been useful for this task/module, and the extent to which a human was needed  
  - Introduce an AI feedback session, where students get feedback from a LLM on a draft of their essay and discuss with their peers |
| Presentation | Students could use AI to generate a script and pass it off as their own. Misconduct is more likely when tasks include:  
- Broad or general topics  
- Lack of specific context or personal reflection  
- No requirement for original research or unique analysis  
- Lack of interactive elements, i.e., questions and discussion  
AI-generated hologram could deliver a virtual presentation | Critical thinking  
- Presentation skills  
- Analysis  
- Research skills | Applying knowledge or skills to real-world problems or current events  
- Ask students to include personal reflection on the task and/or work as a group  
- Include interactive elements such as questions, discussions and demonstrations | Ask students to create a presentation where they showcase their research question, the generative AI model they used, and the outputs generated. Encourage them to critically analyse the strengths and weaknesses of the generative AI approach in addressing their research question.  
- Ask students to reflect on the extent to which AI has been useful for this task/module, and the extent to which a human was needed |
| Online open book exam | Students could copy and paste AI-generated text into exams and pass it off as their own. Generative AI models can be trained on a large dataset of previous exam questions or study materials. Misconduct is more likely when questions include:  
- Information recall  
- Requests to summarise or paraphrase key concepts  
- Algorithmic problem-solving such as maths | Critical thinking  
- Written skills  
- Information recall  
- Problem solving  
- Time management and organisation | Include questions that test students’ critical reflection, critical thinking, analysis, and personal examples in their exam responses  
- Ask them to explain their thought processes or provide unique insights to ensure authenticity  
- Use scenario-based or problem-solving questions  
- Ask students to refer to specific learning events during the module delivery  
- Ask students to critique an AI-generated answer or scenario  
- Ask students to use AI tools or algorithms to analyse and draw conclusions from a data set, and ask them to discuss the strengths and weakness of the AI data analysis | Require Q&A session following presentation to check depth of knowledge and understanding |
<table>
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<tr>
<th>MCQ</th>
<th>SCIENTIFIC/LAB REPORTS</th>
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<tbody>
<tr>
<td><strong>Equations or coding exercises</strong></td>
<td><strong>Students could copy and paste AI-generated text or data into scientific/lab</strong></td>
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</table>
| • Essay or opinion questions | • Research skills 
• Scientific writing |
| **MCQs could be posted into an LLM, and they have been known to score highly. Misconduct is more likely when questions include:** | **• Supervised lab work can help ensure the** |
| • Simple fact-based questions | • Ask students to use AI tools or algorithms to |
| • Numerical calculations | **• Ask students to identify AI-generated answers** |
| • Pattern recognition | **• Using incorrect answers that are plausible and related to the correct answer** |
| **• Critical thinking** | **• Questions that assess higher-order thinking skills such as conceptual understanding, critical reflection and critical analysis** |
| **• Information recall** | **• Including scenario-based questions** |
| **• Problem solving** | **•** |
| **• Time management and organisation** | **•** |

**Scientific/lab reports**

**Students could copy and paste AI-generated text or data into scientific/lab**

**• Research skills**
**• Scientific writing**

**Supervised lab work can help ensure the**

**• Ask students to use AI tools or algorithms to**
| Literature review | Students could copy and paste AI-generated text into literature reviews and pass it off as their own. | • Research skills  
• Written skills  
• Critical reading | • Give students a specific focus or topic that requires depth of engagement – or  
• Analyse and draw conclusions from a data set, and ask them to discuss the strengths and weakness of the AI data analysis or compare to their own analysis  
• Similarly ask students to use AI tools to generate experimental design and data collection and ask them to discuss the strengths and weakness of the AI approach or compare to their own  
• Ask students to evaluate an AI-generated literature review |
## Misconduct is more likely when literature review tasks focus on summarising literature rather than critical analysis and synthesis.

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<tr>
<th>Analysis and synthesis</th>
<th>Encourage them to choose their own sources and perspectives on the literature.</th>
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<tbody>
<tr>
<td>Evaluation</td>
<td>Require up-to-date sources and use of specific reading lists/papers that are behind a pay wall.</td>
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<tr>
<td>Critical thinking</td>
<td>Ask students to critique AI generated literature summaries and compare with those generated themselves.</td>
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<td>Ask students to comment on AI reference hallucinations and highlight why they may seem plausible, but what references are real and appropriate.</td>
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## Students could copy and paste AI-generated text and artefacts into portfolios and pass them off as their own.

<p>| Critical thinking      | Use authentic tasks, focusing on real-world problems, personal experiences or creative tasks. |
| Reflection             | Include documenting process in the portfolio. |
| Creativity             | Get students to critique AI-generated text or artefacts. |
| Research skills        | Including an AI-generated artistic or creative element. |
| Technical skills       | |</p>
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<th>Reports/policy/briefings</th>
<th>Students could copy and paste AI-generated text into reports, policies and briefings and pass it off as their own.</th>
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|                         | • Research skills  
• Information gathering  
• Written skills  
• Critical reading  
• Analysis and synthesis  
• Evaluation  
• Critical thinking  
• Problem solving | • Include personal reflection or self-assessment tasks  
• Encourage multi-modal portfolios  
• Encourage peer review and collaboration during portfolio writing/making process | • Include personal reflection or self-assessment tasks  
• Encourage multi-modal portfolios  
• Encourage peer review and collaboration during portfolio writing/making process  
• Use AI to generate data visualisations  
• Ask students to reflect on their use of AI as part of the portfolio  
• Ask students to design AI prompts as artefacts in their portfolio  
• Ask students to critique an AI-generated report, policy or briefing  
• Ask students to reflect on the extent to which AI has been useful for this task, and the extent to which a human was needed |

- Include personal reflection or self-assessment tasks
- Encourage multi-modal portfolios
- Encourage peer review and collaboration during portfolio writing/making process
- Use AI to generate data visualisations
- Ask students to reflect on their use of AI as part of the portfolio
- Ask students to design AI prompts as artefacts in their portfolio
- Ask students to critique an AI-generated report, policy or briefing
- Ask students to reflect on the extent to which AI has been useful for this task, and the extent to which a human was needed
| Translations | Students could copy and paste AI-generated translations of a source text into their assessments. Misconduct is more likely when translation tasks include: | • Decision making  
• Ethical and legal considerations | • Encourage students to discuss their own perspectives on the topic | • Introduce an AI feedback session, where students get feedback from a LLM on a draft of their report, policy or briefing and discuss with their peers  
• Get students to use AI to simulate policy scenarios or predict outcomes for them to critique/interpret  
• Critically evaluate AI policy recommendations and their feasibility | • Ask students to provide a commentary on the source text and/or their translation, and include one phrase/element for which they suggest two or more options | • Ask students to critically evaluate an AI-generated translation or compare an AI-generated translation with their own translation. |
| Posters | Students could copy and paste AI-generated text, graphics and layouts into posters and pass them off as their own. Misconduct is more likely when posters use include generic formats or templates. | Research skills  
- Design skills  
- Communication skills  
- Critical thinking and analysis  
- Data visualisation | Ask students to present original research  
- Include documentation of process  
- Include a peer formative feedback session in the module, and get students to respond to the feedback in their final poster | Including an AI-generated artistic or creative element, where students have to design and include/explain their prompt  
- Ask students to reflect on the use of generative AI in the |
| Reflective logs | Students could copy and paste AI generated text into their assessment. | • Written skills  
• Critical reflection  
• Meta-cognition  
• Emotional intelligence  
• Critical analysis  
• Self-assessment | • Prioritise reflection on personal experiences, and content from class, formative assessments and observations  
• Ask students to apply their learning to real-world problems or contexts  
• Include a peer formative feedback session in the module, and get students to respond to the feedback in their reflective log | • Encourage students to use AI to generate prompts or questions for reflections  
• Ask students to use AI to identify key themes in their reflective logs, and ask students to reflect on and respond to these  
• Introduce an AI feedback session, where students get feedback from a LLM on a draft of their logs and discuss with their peers  
• Ask students to use generative AI tools to visualise their |
| **Dissertations** | Students could copy and paste AI-generated text into their dissertation. | • Research skills  
• Written skills  
• Critical thinking  
• Data analysis  
• Project management  
• Time Management | • Other solutions as stated in other assessment types  
• Include incremental/formative assessments such as a research proposal, literature review, or draft  
• Ask students to include an AI-generated literature review, and provide a critique  
• Get students to use AI feedback to refine their research proposal and questions  
• Allow students to use AI-generated data visualisations  
• Ask students to include an AI-generated data analysis, and provide a critique  
| **Simulations** | Students could use prompts to generate advice on how to tackle different aspects of the simulation – such as:  
• Data Analysis  
• Critical thinking  
• Project management | • Ask students to include actual data from the simulation in any report or reflective paper  
• Ask students to post prompts for advice/solutions and critique the results |
<table>
<thead>
<tr>
<th>What are the best moves to make to win the Business Strategy Game?</th>
<th>What is the solution to the Ally or Acquire simulation?</th>
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<tbody>
<tr>
<td>Other aspects of simulation-based assessments – such as reflective papers based on a student’s experience or other products using the simulation content, such as reports, could allow students to copy and paste AI generated text into their work.</td>
<td>Time management</td>
</tr>
<tr>
<td>Critical reflection</td>
<td>Problem solving</td>
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<td>Choose simulations with dynamic content – for example, business simulations have competing student teams whose collective decisions create unique data sets from each round of activity</td>
<td>Assess the process of using the simulation – this can include the results generated by the activity carried out by students</td>
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<tr>
<td>Choose simulations where there is more than one possible acceptable outcome</td>
<td>Include formative/incremental assessments, such as practice rounds or feedback meetings</td>
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<td>Ask students to use AI to identify key themes and outline structures for reflective papers or reports</td>
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