

GENERATIVE AI FOR TEACHING, ASSESSMENT AND FEEDBACK: GUIDANCE FOR STAFF

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Generative AI for teaching, assessment and feedback: Guidance for Staff

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1. Summary

What is this document about?

This document provides guidance for academic staff on using generative AI in teaching, assessment, and feedback. It:

- Outlines principles for integrating AI in education
- Explains key concepts related to AI and large language models
- Provides a framework (AI Assessment Matrix) for evaluating and redesigning assessments
- Offers a step-by-step process for reviewing assessments in light of AI
- Addresses academic misconduct, ethical considerations, and privacy concerns related to AI use

Who is this for?

This document is intended for academic and professional staff at the University of Portsmouth who are involved in teaching, assessment design, and student support on courses where generative AI tools may impact learning and assessment practices.

How does the University check this is followed?

This is a live guidance document designed to support staff. If practical issues arise from using the guidance, they will be fed into the document's periodic review.

Who can you contact if you have any queries about this document?

If you have questions about this document please contact: simon.brookes@port.ac.uk.

Executive summary

This guidance document outlines the University of Portsmouth's approach to integrating generative AI in teaching, assessment, and feedback. It establishes six core principles for AI use in education, introduces an AI Assessment Matrix for evaluating and redesigning assessments, and provides a three-step process for adapting to AI-era challenges. The document addresses academic integrity concerns, offering clear guidelines on appropriate AI use in assessments. It also covers ethical considerations and privacy issues related to AI adoption. Overall, this comprehensive guide aims to help staff navigate the complexities of AI in education while maintaining academic rigour and embracing technological advancements.



1. Introduction and Context

Generative artificial intelligence (AI) is a rapidly evolving technology that offers new ways to achieve goals more efficiently, quickly, and cost-effectively. However, as we adopt this innovative technology, our immediate challenge is to guide our staff and students through the early stages of adoption. We recognise the different perspectives on this evolution and commit to being agile in our approach.

Academic integrity, pedagogic innovation, and AI do not exist in isolation from other components of UoP's Education Strategy, Digital Success Plan for L&T, and emerging education priorities (Figure 1). This document outlines our principles and policy on using AI in learning, teaching, and assessment and highlights how the use of AI influences and is influenced by other key components of UoP's systems.

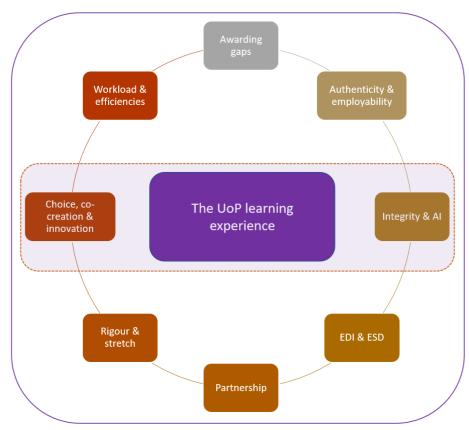


Figure 1: UoP's ecosystem for learning

As a starting point, we should note that:

- It is not possible to completely "design AI out" of most modes of assessment, even if we wanted to which we don't.
- Assessed asynchronous work (i.e. what students are asked to do in their own time, such as essays, assignments, dissertations, reports, coursework, etc) is particularly exposed to extensive AI use.



- Our approach centres on redesigning summative assessments for authenticity, creativity, credibility, and rigour. Within UoP's academic integrity guidelines, such redesigns should embrace rather than reject AI tools.
- Redesigning summative assessments should focus on a balanced assessment diet and the meaningful interplay between synchronous and asynchronous assessment components.

In this context, our task as members of the Portsmouth community is to support the student journey and ensure that every student reaches their final destination, having used AI tools with transparency and integrity throughout that experience.

2. PRINCIPLES

Our six principles on using generative AI tools in education.

- 1. Foster Al Fluency: We will support students and staff in becoming literate in Al technologies. This includes developing critical skills to effectively, responsibly, and ethically use generative Al tools within academic and learning environments.
- 2. Prepare and Upskill Staff: We will ensure that academic and professional staff are well-equipped to guide students in effectively and appropriately using AI tools in their learning journey. This includes providing training and resources to enhance teaching, learning and assessment experiences through AI integration.
- **3.** Adapt Teaching and Assessment for Ethical AI Use: We will adapt our teaching methodology and assessment strategies to incorporate the ethical use of AI tools in our evolving student experience. This involves promoting equal access to AI technologies and ensuring these tools enhance educational outcomes without compromising academic integrity.
- 4. Uphold Academic Integrity and Rigour: We are committed to ensuring transparency in guiding the appropriate and ethical use of generative AI. We will aid students and staff in making informed decisions and encourage proper acknowledgement of AI tool usage. By fostering a culture that supports open discussions about AI use without fear of penalty, we aim to promote academic integrity.
- **5. Promote Collaboration and Innovation:** We will foster a culture of innovation, collaboration, and openness in using AI in education. We will encourage the sharing of best practice, insights, and research findings related to AI applications in teaching, learning, and assessment.
- 6. Maintain a Dynamic Approach to Al Evolution: We recognise the rapidly evolving nature of Al technologies and maintain a flexible and dynamic stance towards their integration into academic practices. Through appropriately established mechanisms, this principle commits the institution to ongoing review and adaptation of policies, practices, and strategies in response to technological advancements in Al



3. Al, Generative Al (GAI) and Large Language Models (LLMs): A Primer

Artificial Intelligence (AI) is a broad term for computer systems designed to perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation. These systems use algorithms and statistical models to process and learn from large amounts of data, enabling them to improve their performance over time.

Generative AI is a subset of AI that focuses on creating new, original content rather than simply analysing or making predictions based on existing data. Generative AI systems use deep learning techniques, such as neural networks, to produce various types of content, including:

- Text: AI models such as ChatGPT, Copilot, Claude and Gemini can generate human-like text based on input prompts. These models can assist with writing tasks, answering questions, and engaging in conversations.
- Images: Tools like DALL-E (accessible from ChatGPT and Copilot), Midjourney, Davinci, and Stable Diffusion can create original images and artwork based on textual descriptions provided by users. These systems can generate illustrations, photographs, and even abstract art pieces.
- Audio and Video: Generative AI can produce audio and video content, such as music, speech, and short video clips. Examples include Google's AudioLM and OpenAI's Sora.
- Code: AI models such as ChatGPT, Copilot, Claude and Gemini can generate code snippets and assist with software development tasks based on natural language inputs.

Large Language Models (LLMs) are an essential part of generative AI for text-based applications. They are trained on vast amounts of text data, learning patterns, grammar, and language semantics. LLMs can generate coherent and relevant text by processing this data, forming the foundation of AI models like ChatGPT, Claude, and Gemini. The term "large" refers to the neural networks' extensive size and the enormous datasets used to train them, ranging from billions to trillions of parameters. The terms Generative AI (GAI) and Large Language Model (LLM) are often used interchangeably, but strictly speaking, LLM should only refer to the specific type of AI model that focuses on processing and generating human-like text based on patterns learned from vast amounts of text data. LLMs are a key component of many Generative AI applications, particularly those involving text generation, but Generative AI encompasses a wider range of AI systems that can create various types of content, including images, audio, and video.

These tools can help with idea generation, inspiration, and the creation of various types of media. However, it is crucial to recognise generative AI's limitations and use these tools responsibly. While generative AI can assist with learning and creative tasks, students will benefit from developing their skills, critical thinking abilities, and original ideas rather than relying solely on AI-generated content.



4. Using AI Tools in Assessment

As generative AI tools become increasingly sophisticated and accessible, academic staff must consider their role in student assessments. While it may be tempting to try to completely "design AI out" of assessments, this approach is not only impractical but also runs counter to our goal of preparing students for a future in which AI will play an increasingly significant role.

It is essential to acknowledge that assessed asynchronous work, such as essays, assignments, dissertations, reports, and coursework, is particularly vulnerable to extensive AI use by students. Rather than attempting to eliminate AI from these assessments, we should focus on redesigning them to embrace AI tools while ensuring authenticity, creativity, credibility, and rigour, all within UoP's academic integrity guidelines.

Central to this approach is a focus on the dimension of time in assessments. By integrating real-time (synchronous) and flexible (asynchronous) assessment components, we can harness the strengths of AI tools while still challenging students to demonstrate their understanding, critical thinking, and original contributions. This may involve incorporating more in-class or time-limited assessments and designing asynchronous tasks that require students to build upon AI-generated content in ways that showcase their individual insights and expertise.

This approach requires communication with students so that they are fully aware of the parameters of the assessments, particularly regarding the use of AI. This information should be included in each assessment brief in Moodle.

4.1 Considerations for Assessment Design: The AI Assessment Matrix

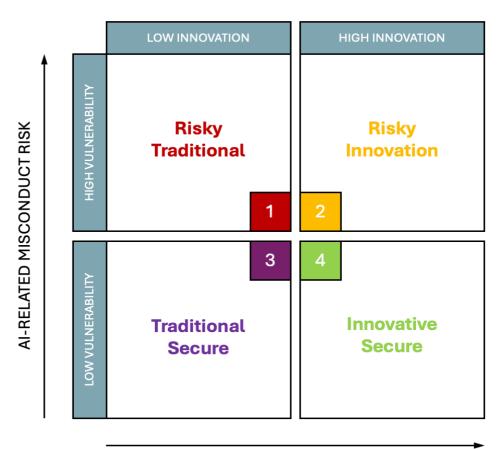
Recall our AI and assessment principles:

- It is not possible to completely "design AI out" of most modes of assessment, even if we wanted to
 - which we don't.
- Assessed asynchronous work (i.e. what students are asked to do in their own time, such as essays, assignments, dissertations, reports, coursework, etc) is particularly exposed to extensive AI use.
- Our approach centres on redesigning summative assessments for authenticity, creativity, credibility, and rigour. Within UoP's academic integrity guidelines, such redesigns should embrace rather than reject AI tools.
- Redesigning summative assessments should provide a balanced diet and meaningful interplay between synchronous and asynchronous assessment components.

The AI Assessment Matrix is a useful tool to help you evaluate and plan your assessments.



Figure 2: The AI Assessment Matrix



INNOVATIVE USE OF AI



QUADRANT 1

Characterised by traditional methods such as essays and reports, these assessments face significant risks of AI vulnerability, highlighting the need for urgent reassessment and potential redesign.

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QUADRANT 2

Though these assessments integrate AI technologies, they remain at risk of AI misuse.



QUADRANT 3

These assessments emphasise a traditional approach and maintain strong defences against AI misuse, focusing on reliable, conventional evaluation methods.



QUADRANT 4

Assessments in this quadrant leverage AI to improve learning experiences and outcomes while ensuring academic integrity.



4.2 Considerations when using the AI Assessment Matrix.

- There are no hard boundaries between quadrants. Instead, think of the axes as continua.
- Begin by thinking about your current assessments. Where do they sit on the matrix?
- Q1 assessments are highly vulnerable to AI-related misconduct. Asynchronous written assessments, such as traditional essays, are most at risk, but remember that generative AI is also capable of producing computer code, images, sound, music and video. You'll likely want to 'move' summative assessments from Q1 to Q3 and Q4.
- It is often helpful to go back to basics. Consider the assessment learning outcomes. What are you trying to assess? Do you have to assess the final artefact, or would it be more beneficial to assess aspects of the learning journey? In an era where generative AI tools are ubiquitous and likely to be used in the workplace, do you need to reconsider the assessment learning outcomes?
- Assessments in Q2 can be valuable for teaching students the proper use of generative AI tools within their field of study. Consider creating practice assignments or low-stakes assessments that fit into this quadrant to help students develop these skills.
- Quadrant 3, labelled "Traditional Secure," focuses on assessments that employ established, reliable techniques to reduce AI-related misconduct while not extensively integrating cutting-edge AI technologies. These assessments usually involve formats that necessitate direct interaction, individualised responses, or practical activities. We commonly refer to these as synchronous activities, including oral examinations (vivas), in-class presentations, in-class tests, practical exams/performances, peer reviews, and group discussions. Furthermore, there will be numerous instances of asynchronous practical assessments that belong to this category, such as creating original works of art, music, or design. When considering synchronous assessments, you must be especially mindful of issues relating to equity, fairness and inclusion.
- You will likely need a balanced mix of synchronous and asynchronous assessment elements. This approach not only addresses AI-related risks but also supports a comprehensive assessment of student learning.

Q1	Q2
Starting Point: High Vulnerability, Low Innovation	Integration of Generative AI
Assessment Description: Students are tasked with writing a traditional 2000-word essay on how the changing nature of broadcast platforms affects television production.	Enhancement: Introduce a requirement that students use ChatGPT or another AI tool to generate initial drafts or ideas for specific sections of their essays, such as the impact of technology on content creation. Students must submit these AI-generated drafts along with their final essay.
Current Issue: This format is highly susceptible to generative AI misuse, as students might use AI tools like	Continued Risk: Although incorporating AI into the process introduces an innovative element,

In the following example, we show how a written assessment can be repositioned from Q1 to Q4.



ChatGPT to write or substantially aid in writing their essays without engaging deeply with the material.	there's still a high risk of AI misuse since reliance on generative text can bypass critical thinking and personal insight. This might be an ideal formative assessment.
Q3	Q4
Addition of Synchronous Components* Enhancement: Transform the traditional essay into a multi-part assignment with a formative written component and a sumamtive in-class presentation, viva or assessed discussion. Students could first submit a brief written outline or position paper on the topic, which they must expand upon through a live presentation or in-class debate. Security Measures: The live component ensures that students demonstrate their understanding and ability to articulate their thoughts without relying on Al-generated content. The real-time nature of the presentation, discussion and debate makes it difficult for Al tools to be used effectively, as students must engage dynamically with the content and audience. Alternative approaches could be designed to involve the use of video recordings. *Please note that any addition of synchronous components may require additional staff resources, will need to be timetabled and may need Head of Department approval. The artefact type would need to reflect the synchronous part in the module descriptor.	Advanced Critical Engagement with Generative AI Enhancement: Students use ChatGPT not only to generate initial ideas but also to simulate different perspectives, such as arguing for or against the influence of streaming platforms. Students must then analyse these perspectives, debate the AI's viewpoints, and integrate this discussion into a comprehensive essay that evaluates the biases and limitations of AI- generated content. Security and Innovation: This final stage ensures deep engagement with AI, where students are actively using generative tools to enhance learning and develop critical thinking skills. They must demonstrate a sophisticated understanding of the subject matter and the AI tool's capabilities and limitations.

4.3 Navigating the Transition: A Step-by-Step Process for Reviewing and Redesigning Assessments.

STEP 1: REVIEW and reflect

Using the AI Assessment Matrix as a starting point, critically evaluate your current assessment strategies in light of the growing influence of Generative AI. Reflect on the following questions:

1. To what extent do your current assessments rely on asynchronous tasks, such as essays, assignments, dissertations, reports, or coursework?



- 2. How might students use AI tools during the preparation of these asynchronous assessments?
- 3. Could the question/brief be easily answered by AI?
- 4. Have you encountered previous academic misconduct issues with the assessments?
- 5. In what ways could AI assist students in demonstrating authentic learning, creativity, and critical thinking within the context of your assessments?
- 6. How well do your current assessments balance synchronous and asynchronous components, and how might AI impact this balance?

When reflecting on these questions, consider the specific characteristics of your module, the learning outcomes, past student behaviours, and feedback.

STEP 2: TEST your assumptions

Having reflected on your current assessment strategies, it's time to test your assumptions about the potential impact of AI:

- 1. Experiment with AI tools like ChatGPT to understand their capabilities and limitations in relation to your assessment tasks.
 - a. Accuracy: Did the AI provide factually correct and current information? Was the generated content sufficient to meet the passing criteria for the assessment?
 - b. Coherence: Was the AI's response clear, logical, and concise?
 - c. Relevance: Did the AI directly address the central question or topic?
 - d. Compliance: Did the AI follow the given instructions and format requirements?
 - e. Referencing: Did the AI provide accurate and appropriate references when needed?
 - f. Usability: Was the AI tool straightforward and efficient for the assessment?
 - g. Grading: Based on your marking criteria, how likely is it that the AI-generated output would receive a good grade?
- 2. Engage in discussions with colleagues and students to gather diverse perspectives on how AI might be used in your assessments and its potential implications.

By actively testing your assumptions, you'll gain valuable insights into how AI can be effectively integrated into your assessment strategies while maintaining academic integrity and promoting student learning.

STEP 3: DECIDE what to do next

Based on your reflections and the insights gained from testing your assumptions, decide on the next steps for adapting your assessments:

- 1. Identify specific asynchronous assessment components that could benefit from the thoughtful integration of AI tools and plan how to redesign them accordingly (who can they contact for support?).
- 2. Consider increasing the proportion of synchronous assessment components, such as inclass presentations, live debates, or real-time problem-solving tasks, to create a more balanced assessment diet.
- 3. Communicate clear guidelines and expectations for students on the appropriate use of AI tools in their assessments, aligned with UoP's academic integrity policies (see Generative AI Student Guide).



- 4. Create opportunities for students to reflect on their learning process and the role of AI in their academic work, fostering a culture of transparency and critical engagement with these tools.
- 5. Commit to an iterative process of reviewing and refining your assessment strategies as AI technologies evolve and new best practices emerge.

Remember, the goal is not to eliminate AI from assessments but rather to harness its potential to enhance student learning while maintaining the authenticity, creativity, credibility, and rigour of your assessment strategies.

The following guides might also prove to be useful:

- QAA Guide <u>https://www.qaa.ac.uk/docs/qaa/members/reconsidering-assessment-for-the-chat-gpt-era.pdf</u>
- The Monash University AI and assessment guidance provides a helpful framework for designing assessments - <u>https://www.monash.edu/learning-teaching/teachhq/Teaching-practices/artificialintelligence/ai-and-assessment</u>
- This website contains further useful guidance and curated examples of how to embed AI into assessments <u>https://www.ai-learning-circle-mon.com/guides-for-assessment</u>

In addition, the student guide provides a clear and detailed overview of our institution's strategic approach to integrating AI technologies into the assessment process. The guide includes examples illustrating the appropriate and effective use of AI in various assessment contexts while emphasising the importance of academic integrity and transparency. Students are required to acknowledge their use of AI in all assessments, fostering a culture of honesty and accountability in the learning environment.

5. Academic Misconduct

The university's position relating to AI and academic misconduct is captured in our existing <u>Student</u> <u>Conduct Policy</u>.

The University's position on the use of AI is that it is permitted as a tool to assist and inform research and the generation of ideas, planning, and output. The use of AI in submitted work must be underpinned by the principles of academic integrity, proper citation, and referencing, with clear indication given as to where AI has been utilised in all submissions. Failure to do so will be considered an act of academic misconduct.

In addition, this extract from the Generative AI Student Guide summarises the advice for students:

We require that most work submitted for assessment is your own original content, demonstrating your knowledge, skills, and critical thinking abilities. To that end, content generated by AI must not be included in your assessment submissions unless specified in the assessment brief and/or approved by your module coordinator.



Think of it this way: Is it acceptable to have someone else entirely or partially do your assignment for you?

Of course, the answer is no! Doing so would breach the University's Academic Regulations, outlined in the Student Conduct Policy. Therefore, make sure you apply the following guidance when working on your assessments:

Ensure your submitted work is genuinely yours, not just copied or edited from AI-generated content (including writing, images, video, audio and code). Simply editing AI-generated content is not enough for it to be considered your own work! Engage with the material, think critically, and express ideas in your own style and voice to maximise learning and maintain academic integrity.

Detection Tools

We will not rely on **AI detection tools** to assess the integrity of student work. These tools often exhibit limitations in their accuracy and fail to provide adequate explanations regarding their scoring methodology and the interpretation of the scores they generate. Moreover, these tools are typically designed to detect specific versions of particular language models, which restricts their general applicability and reliability in identifying AI-generated content across a wide range of sources.

Rather than immediately focusing on detecting the use of generative AI as our primary response, it is crucial that we proactively seize opportunities to critically evaluate the types of assessments within our programs and modules. By identifying areas where our assessments are most vulnerable to the potential misuse of generative AI, we can develop targeted strategies to mitigate the impacts of these technologies. This proactive approach will allow us to adapt our assessment design, ensuring the integrity and effectiveness of our evaluation methods in the face of evolving AI capabilities while still harnessing the potential benefits of these tools to enhance student learning experiences.

6. Governance and Policy

Our staff and students must understand the ethical and security implications of using generative AI tools in their work and study practices. It is important to acknowledge that these guidelines are not independent but augment our existing policies. The policy clarifications below address data privacy issues, potential biases, and other ethical concerns and should be considered in the larger context of Portsmouth's policies.

6.1 Ethical Considerations

As generative AI rapidly evolves, we must carefully consider the ethical challenges that come with it. The opaque nature of AI training processes and inherent biases in the training data pose risks to fairness and equity, making it necessary for us to evaluate the methodologies behind AI tools critically. Additionally, the emergence of AI-generated content raises complex challenges to intellectual property rights and academic integrity, blurring the lines of traditional authorship and leading to plagiarism concerns.



The environmental impact of AI technologies is also a concern, as substantial energy consumption and carbon emissions are required for model training. Furthermore, ethical considerations extend to the labour practices involved in AI development, where outsourcing to low-wage workers under poor conditions is prevalent. This prompts us to reflect on the ethical implications of supporting such technologies.

In addition, the potential for AI to generate inaccurate or outdated information places a responsibility on users to critically assess the validity and relevance of AI-generated content. Understanding and addressing these ethical challenges is essential as we integrate generative AI into our educational practices. Through thoughtful and critical engagement with these technologies, we can balance their transformative potential with the ethical standards that guide our academic community.

6.2 Privacy and Data Protection

Artificial Intelligence (AI) tools present significant benefits but also come with inherent privacy risks. Even when these tools are not directly trained on user inputs, caution is necessary. Staff and students should be vigilant about the data they enter into AI systems.

6.2.1 Best Practices for Data Protection

The first step when considering the use of AI tools should be a necessity assessment. Before inputting personal data (e.g., names, ID numbers, contact details, email addresses, etc), users should carefully consider whether it's necessary to include this information and whether the desired outcome can be achieved without personal details. This critical evaluation helps minimise potential privacy risks from the outset.

If personal data must be used, the principle of data minimisation should be applied rigorously. Users should include only the minimum amount of personal information required to achieve their objectives. It's crucial to avoid unnecessary details such as full names, ID numbers, contact information, and email addresses unless they are essential for the task at hand.

Implementing a privacy-by-design approach is also vital. This means carefully structuring inputs to exclude non-essential personal information and, where possible, using anonymisation or pseudonymisation techniques. By incorporating these practices, data protection becomes an integral part of the process rather than an afterthought.

6.2.2 Configuring AI Tools for Privacy

Most generative AI platforms offer privacy-enhancing options that users should take advantage of. For example, in ChatGPT, users can navigate to Settings > Data Controls and find the option "Improve the model for everyone." Disabling this option is generally recommended, especially when working with personal data. This simple step can prevent unintended data uploads, reduce the risk of data breaches, and ensure that personal information isn't used for model training without consent.

6.2.2 Transparency with Students

In an educational context, transparency regarding AI use is paramount. Staff should inform students about the use of AI tools in academic processes, including setting, checking, and marking assessments. They should explain potential impacts on coursework or evaluations and clearly communicate how student data might be used with AI tools. The rationale behind this transparency is rooted in fundamental data



protection principles. Students should never be surprised by how their personal information is utilised, especially in an educational environment that increasingly incorporates AI technologies.

7. Further Support for Staff

The Centre for Academic and Digital Innovation can provide support, guidance, workshops and more. Email: CADI@port.ac.uk.

This document is a living entity that will be regularly evaluated and updated to reflect the latest advancements and insights in generative AI.



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