



# **Generative Artificial Intelligence (AI)**

## **Staff Guidance**

29<sup>th</sup> September 2023

### **Purpose**

This document provides additional guidance to the academic community on DkIT's approach to generative artificial intelligence (AI) and provides practical advice on implications for teaching, learning and assessment, and particularly focusses on assessment. This is a working document that will be updated regularly as best practice emerges on the ongoing implications of generative artificial intelligence in education. The National Academic Integrity Network (NAIN) is advising higher education institutions on appropriate courses of action and DkIT will continue to provide updated guidance based on its advice.

### **Context**

Artificial Intelligence (AI) is the field of computer science that focuses on creating intelligent machines capable of performing tasks that typically require human intelligence, such as recognizing speech, making decisions, and solving problems. AI systems use algorithms, statistical models, and machine learning techniques to learn from large amounts of data and improve their performance over time.

Generative Artificial Intelligence (AI), as the name suggests, can generate new content, such as images, music, and text. The content these tools generate is "original," in-as-much as what they generate is always unique (i.e., its generated text will fool plagiarism-detection software like Turnitin), but it is trained on existing, mostly human-generated content published online. However, generative AI text generators frequently generate inaccurate and unreliable text, including generating references that do not exist, and all AI outputs should be treated critically.

In November 2022, a generative artificial intelligence (AI) tool, ChatGPT (<https://chat.openai.com/>), was released which caused widespread interest and concern across the education sector because of its ability to create plausible answers to assignments, mathematics problems, construct essays, and write computer code, all in seconds. The release of the tool raised many important issues including how educational institutions approach AI use in teaching, learning and assessment.

## **DKIT's Approach to Artificial Intelligence (AI)**

DkIT supports the responsible and ethical use of generative artificial intelligence (AI). This approach to generative artificial intelligence has been adopted in order to equip our learners with the skills to critically engage with technologies so that as technologies develop and new ones emerge we (1) explore and educate learners on the benefits of the judicious use of technologies whilst also (2) ensuring they understand the risks and ethical considerations of such tools and technologies. Whilst AI technologies such as ChatGPT are disruptive, especially for assessment, a blanket prohibition on their use or adopting approaches to outwit or detect them is not a productive strategy. The use of generative artificial intelligence is already widespread and learners and staff need to be supported to use them ethically, critically and transparently.

The Institute's current policy position, which is evolving, on the use of generative artificial intelligence can be found in *Section 4: Plagiarism* (pg. 4) in the DkIT Academic Integrity Policy and Procedures (<https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html>; approved at Academic Council, Meeting No. 186; 28<sup>th</sup> April 2023) states the following:

*"Using generative artificial intelligence tools (e.g. ChatGPT) in an assessment unless explicitly permitted to do so and with proper acknowledgement, is a form of plagiarism".*

Academic Integrity is potentially breached if students submit the products of generative artificial intelligence as their own work without acknowledgement or without authorisation to use generative artificial intelligence in fulfilling an assessment.

## **Artificial Intelligence (AI) and Teaching, Learning and Assessment**

The recently published guidelines from Quality and Qualifications Ireland (QQI), "*Generative Artificial Intelligence (AI) Guidelines for Educators*" (September 2023), which were developed by the National Academic Integrity Network (NAIN) (<https://www.qqi.ie/what-we-do/engagement-insights-and-knowledge-sharing/national-academic-integrity-network>), are designed to help support educators in their understanding of the potential uses of generative artificial intelligence (AI), both in supporting learning for their students, and most critically, in providing a potential 'short cut' to students in the fulfilment of required tasks for assessment. The guidelines were developed to provide support and advice for educators to reflect on, and as appropriate, to share and discuss with their students to enable them to understand and appreciate what is and isn't permitted. The overall goal is to enable an understanding of what GenAI can and can't offer, and thereby, to ensure an ethical basis for the use of GenAI tools, helping students to build their own self-awareness and knowledge, and avoid breaches of academic integrity. The following guidelines are provided:

- What everyone needs to know.
- What lecturers and other educators need to know and can do.
- What programme managers and institutional leaders need to do.
- What students need to know and do.

## **Artificial Intelligence (AI) and Assessment**

Our current advice to lecturers is to be clear with learners what you regard as permissible use of generative artificial intelligence (AI) in assessments, activities and other tasks, and how they should acknowledge that use.

It is important to ensure that students receive consistent messages about appropriate use of generative artificial intelligence across a programme (i.e., a programmatic approach). With this in mind, this should be tabled as an item at Programme Board meetings and guidance provided to students. This does not mean that every lecturer or every assessment needs to adopt the same option (see options below) but it does mean that programme teams should be mindful that students are not receiving mixed messages.

The updated DkIT assessment coversheet, which includes a specific reference to generative AI, should be completed by all students for all assessments. For all assessments, lecturers should clearly detail whether the use of generative artificial intelligence (AI) is unrestricted, restricted, or prohibited. There are four options for specifying the extent to which generative artificial intelligence (AI) can be used in an assessment:

1. Prohibit the use of generative artificial intelligence (AI) for the assessment entirely.
2. Restrict certain types of generative artificial intelligence (AI) tools for the assessment (e.g. allow the use of image generators but not text generators).
3. Restrict certain ways of using generative artificial intelligence (AI) tools for assessment (e.g. allow the use of a text generator to develop an essay outline or rough draft, but not for the final draft).
4. No restrictions on the use of generative AI for an assessment task.

Restriction on the use of generative AI for a task should be based on educational reasoning, the nature of the task and its function in generating evidence of learner learning. Of critical importance in deciding on generative artificial intelligence (AI) use and any restrictions is whether generative artificial intelligence (AI) use would contribute to or potentially detract from intended learning.

Lecturers should include one of the following narratives in the assessment brief as appropriate:

No	Extent of AI Use	Narrative to be Included in Assessment Brief
1	<i>When restricting all use of generative AI for an assessment task</i>	<p>Generative artificial intelligence (AI) tools cannot be used in this assessment task. In this assessment, you must not use generative artificial intelligence (AI) (ChatGPT, ChatSonic, Bing Chat, Lex, DALL-E 2, or other tools) to generate any materials or content in relation to the assessment task.</p> <p>The DkIT Academic Integrity Policy and Procedures, <a href="https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html">https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html</a>) states the following:</p> <p><i>“Using generative artificial intelligence tools (e.g. ChatGPT) in an assessment unless explicitly permitted to do so and with proper acknowledgement, is a form of plagiarism”.</i></p>
2	<i>When restricting types of generative AI tools for assessment</i>	<p>Generative artificial intelligence (AI) tools are restricted for this assessment task. In this assessment, you may use the following generative artificial intelligence (AI) only- <i>[insert names of and hyperlinks to AI tools, or types of tools (e.g., image generators/text generators)]</i>.</p> <p>Any use of generative AI must be appropriately acknowledged (in accordance with DkIT Academic Integrity Policy and Procedures, <a href="https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html">https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html</a>):</p>

		<i>“Using generative artificial intelligence tools (e.g. ChatGPT) in an assessment unless explicitly permitted to do so and with proper acknowledgement, is a form of plagiarism”.</i>
3	<i>When restricting ways of using generative AI tools for assessment</i>	<p>Generative artificial intelligence (AI) tools are restricted for certain functions in this assessment task. In this assessment, you can use generative artificial intelligence (AI) in order to <i>[insert full details of function, task for which use is permitted]</i> only.</p> <p>Any use of generative AI must be appropriately acknowledged (in accordance with DkIT Academic Integrity Policy and Procedures, <a href="https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html">https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html</a>).</p> <p><i>“Using generative artificial intelligence tools (e.g. ChatGPT) in an assessment unless explicitly permitted to do so and with proper acknowledgement, is a form of plagiarism”.</i></p>
4	<i>No restrictions on use of generative AI for an assessment task</i>	<p>Generative artificial intelligence (AI) tools are not restricted for this assessment task. In this assessment, you can use generative artificial intelligence (AI) to assist you in any way.</p> <p>Any use of generative AI must be appropriately acknowledged (in accordance with DkIT Academic Integrity Policy and Procedures, <a href="https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html">https://www.dkit.ie/about-dkit/policies-and-guidelines/academic-policies.html</a>).</p>

### Declaration of Use - Student

In instances where the use of generative artificial intelligence (AI) is permitted in an assessment a learner must provide a “*Declaration of Use*” acknowledging that they have used generative artificial intelligence in the creation of material for the assessment. Material that has not been adapted/modified should be referenced using existing reference styles. The declaration of use should be included in an appendix in the assessment submitted by the learner and should:

- Provide a written acknowledgment of the use of generative artificial intelligence.
- Specify which technology/technologies were used.
- Identify the prompts used.
- Provide the resulting outputs.
- Explain how the output was used in the submitted work (used directly or modified).

If generative artificial intelligence (AI) is permitted in the assessment and the learner has chosen not to use it, the following disclosure in the learner submission is recommended: “*No content generated by AI technologies has been used in this assessment*”.

### Declaration of Use Example

I acknowledge the use of [1] [insert AI system(s) and link(s)] to [2] [specific use of generative artificial intelligence]. The prompts (generated on <date(s)>) used include [3] [list of prompts]. The prompt outputs were as follows / are included in an appendix (depending on volume) [4] [prompt outputs]/[appendix]. The output from the generative artificial intelligence was used to [5][explain use].

I acknowledge the use of [1] ChatGPT (<https://chat.openai.com/>) to [2] generate materials on background research for this assessment. The prompts (generated on 15<sup>th</sup> Sept 2023) used include:

[3] Write a 50 word summary about the topic x. Write it in an academic style.

The prompt outputs are included in an appendix at the end of the assessment [4] [appendix].

The output from the generative artificial intelligence was [5] adapted and modified for the final submission.

### Suspected Breaches of Academic Integrity

If a lecturer suspects that a learner has used generative artificial intelligence (AI) without acknowledging its use, then the DkIT Academic Integrity Policy and Procedures apply in exactly the same manner as for any other unacknowledged source.

In cases where a large proportion of the work is identified as potentially generated by generative artificial intelligence (by whatever means determined by the lecturer(s)), the lecturer(s) will need to investigate further. In such cases, it is recommended that a lecturer(s) begin by having a conversation with the student(s) in question, which may be evaluated in the context of other factors such as the lecturer's knowledge of the student(s) concerned and the student(s) prior performance in assessment.

See the appendix for "*Artificial Intelligence (AI) Detection in Turnitin*".

### Reference(s)

- Limerick and Clare Education and Training Board College of FET, 2023, "*Guidance on the use of AI in Education*" (provided in the QQI Academic Integrity Update in July 2023).
- Quality and Qualifications Ireland, 2023, "*Generative Artificial Intelligence (AI) Guidelines for Educators*", Quality and Qualifications Ireland, viewed 22 September 2023, <https://www.qqi.ie/news/nain-publishes-new-genai-guidelines-for-educators>.

### Document History

Version Number	Date Approved	Approved By	Brief Description
1	29/09/2023	Academic Council (Meeting No. 189).	Initial guidance for staff.

## Appendix: Artificial Intelligence (AI) Detection in Turnitin

In April 2023, Turnitin added an artificial intelligence (AI) detection feature to the Feedback Studio features that we have been using for some time here in DkIT. This feature generates a report, separate from the Similarity Report, which is intended to highlight and indicate the percentage of a document that may have been generated by generative AI tools. This report and percentage are only visible to lecturers on a module. It is not available to students.

Turnitin claims that it can identify with 98% confidence the percentage of the prose in long-form writing that may have been AI-generated. This claim is based on data that has been verified in the company's AI Innovation lab where its algorithms have been trained to detect ChatGPT-3 and ChatGPT-3.5. However, it is important to note from the perspective of institutions such as our own there has been a very short lead-in time to the launch of this feature with little time to examine evidence of its reliability or accuracy. Further, Turnitin documentation points out that the percentage shown should not be used as a definitive measure of academic misconduct. In addition, the company acknowledges the possibility of the AI detection tool generating false positives i.e. identifying work as AI-generated when it is not. The disclaimer which accompanies Turnitin's AI report points out,

*"Our AI writing assessment is designed to help educators identify text that might be prepared by a generative AI tool. Our AI writing assessment may not always be accurate (it may misidentify both human and AI-generated text) so it should not be used as the sole basis for adverse actions against a student. It takes further scrutiny and human judgment in conjunction with an organization's application of its specific academic policies to determine whether any academic misconduct has occurred".*

However, as this tool and the algorithm on which it is based have not yet been sufficiently evaluated in educational contexts (as of September 2023), the AI detection report should be used only as an indicator ("red flag") rather than definitive proof that a submission contains AI-generated content. Thus, while it can be used as supporting information to suggest a need to examine a student's work more closely, it cannot be used in isolation to make decisions around potential cases of academic misconduct. Further, if Turnitin is being used for student submissions, it is also recommended that in addition to advising students against inappropriate use of AI-generated material, lecturers should alert students to the existence of the detection feature (irrespective of its current effectiveness).



# Generative Artificial Intelligence: Guidelines for Educators



**QQI**

Quality and Qualifications Ireland  
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

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# Introduction



# Introduction

These **Generative Artificial Intelligence (GenAI) Guidelines for Educators** have been developed by a National Academic Integrity Network (NAIN) Working Group, as a response to the swiftly evolving and developing field of GenAI and the challenges that it may pose for academic integrity to educators and their students.

They are designed to help support educators in their understanding of the potential uses of Generative AI, both in supporting learning for their students, and most critically, in providing a potential 'short cut' to students in the fulfilment of required tasks for assessment. The guidelines have been written to provide support and advice for educators to reflect on, and as appropriate, to share and discuss with their students to enable them to understand and appreciate what is and isn't permitted. The overall goal is to enable an understanding of what GenAI can and can't offer, and thereby, to ensure an ethical basis for the use of GenAI tools, helping students to build their own self-awareness and knowledge, and avoid breaches of academic integrity.

The Guidelines are structured so that Part 1 contains a list of Recommendations, classified under the four headings:

- What everyone needs to know
- What lecturers and other educators need to know and do
- What programme managers and institutional leaders need to do
- What students need to know and do

Part 2 provides the detailed guidelines for each of the four headings.

Part 3 provides a list of further reading, links, and resources.

These Guidelines are not intended to replicate what is currently available to educators, but to provide practical advice which can be applied to the design of programmes including assessments, and be incorporated into teaching practice. This area is a dynamic one which is developing at a very fast pace; this means that these Guidelines, which will be published online, may well need to be regularly reviewed and updated.

We hope however that they will provide some practical support for everyone involved in tertiary education and that they will have a positive impact in supporting high quality teaching, learning and assessment policies and practices.

## **Billy Kelly**

Chair, National Academic Integrity Network,  
July 2023







# NNN



01

# Recommendations





## Part 1: Recommendations

### What everyone needs to know

- 1) Tools which include Artificial Intelligence (AI) can produce impressive outputs, whether well-structured and fluently written reports, images and graphics, computer code, or mathematical solutions. They have a huge potential range of applications.
- 2) This technology is becoming ubiquitous, embedded within major software suites (such as Microsoft Office, Google Workspace, etc) and browsers, and has spurred the development of a large number of new apps and tools proffered by a myriad of start-ups and project teams.
- 3) It is crucially important for everyone to be aware that these tools generally are based on mimicry and reproduction of content, style, and genre and are not always optimised to provide factually correct answers. Nor should their speed, conversational interface, and apparent quality of their output be taken as evidence of any 'intelligence' or subject expertise.
- 4) There are concerns about how the tools are developed and trained (around copyright, intellectual property, wellbeing of those hired to screen and label content, energy usage, etc) as well as how they may be misused or misapplied.
- 5) It is important that everyone is familiar with their current institutional policy on the use of GenAI, bearing that it is likely to be updated on a regular basis.

### What lecturers and other educators need to know and do

- 1) Be familiar with these tools and their availability, and recognise their limitations and affordances.
- 2) As soon as you can, review all your assessments, replacing or modifying any which may be completed satisfactorily by someone using AI without an appropriate level of understanding of the subject, or which are vulnerable to breaches of integrity or security. If you identify a particular appropriate role for GenAI in your courses, then ensure that students are aware of what constitutes authorised and unauthorised use.
- 3) Work with colleagues, and within disciplinary communities, to design assessments which have strong validity (i.e., clearly aligned with the learning outcomes and the skills which they are meant to demonstrate) and in which there is an appropriate balance of credit between the process of preparing for and undertaking the assessment and the final product, helping students develop self-efficacy, critical thinking, and a professional disposition.
- 4) Take the opportunity, at programme level, to review overall assessment volume, range of assessment types, and alignment with intended programme outcomes across the complete programme and year cohorts, identifying any vulnerabilities, over-assessment, and opportunities for enhancement.
- 5) Be consistent in your approaches to student training, assessment practice,

and in the implementation of institutional academic integrity policies, data protection, and assessment regulations. There must be clear information for students that unauthorised submission of the output of GenAI as their own work constitutes academic misconduct and will be treated accordingly.

- 6) In your partnership with students, emphasise values such as integrity, trust, and truthfulness as being at the heart of learning, knowledge discovery and creativity.

### **What programme managers and institutional leaders need to do**

- 1) Ensure that there is up-to-date and regular training for all staff and students on academic integrity, AI, and assessment, and that appropriate resources are allocated to this area to ensure that all avail of it.
- 2) Programme leaders should work with colleagues to plan and undertake a comprehensive review of assessment, focusing on validity, range of types, and volume, with a view to enhancing both the programme design and the student learning experience.
- 3) Update, and regularly refresh, policies on academic integrity, including the use of GenAI, and assessment to more effectively reflect and respond to these issues and take the opportunity to reiterate the valuable educational purposes of assessment.

- 4) Develop an institutional ethos and culture which emphasises integrity, honesty, trust, and respect, rather than let the conversations be dominated by suspicion, surveillance, and distrust. Workshops and training events which promote dialogue and engagement can be valuable in this regard.

### **What students need to know and do**

- 1) AI tools are appearing everywhere these days: embedded within packages that are used to write text, produce slide-decks; or in new apps and services that get promoted on social media. They can be useful for many types of tasks, but they also have serious limitations and can give unreliable answers whilst appearing confident and convincing.
- 2) It is crucial to be aware of what these tools can and cannot do, as well as recognise the ethical concerns associated with their development and use.
- 3) Assessment is meant to provide the student with an opportunity to demonstrate achievement of the intended learning outcomes of the module or programme, to the standard required. Lecturers often use assessment tasks as a means of helping students focus on the key knowledge and skills that they need to develop and encourage them to practice and build their confidence. It is important that students submit work that they have produced and acknowledge the sources used, as well as paying close attention to

the requirements of the task and policies on academic integrity.

- 4) In reality, assessment can be stressful, but to maintain integrity (both personal integrity and that of the qualifications), students should resist any attempts to take 'shortcuts' or engage in any form of misconduct (copying, plagiarism, submitting materials produced largely by GenAI, etc). If a student feels unable to complete the assessment for whatever reason, they should discuss this with their lecturer, counsellor, SU Officer or appropriate person and see what alternative arrangements can be made.







02

# Detailed Guidelines





## Part 2: Detailed Guidelines

Recent releases of tools built on ‘Generative AI’ have made headlines across the world. At first glance, their capabilities seem impressive: writing fluent text on any subject, eloquently expressed with excellent structure and grammar; producing visually arresting images in any specified genre; constructing (and explaining) computer code for simple or complex tasks; suggesting statistical tests for data sets and producing a range of analyses; solving mathematical and other symbolic manipulation challenges. Their speed of response, their conversation-like ability to build on previous prompts and answers, and their (superficially, at least) plausible output, however, runs the risk of anthropomorphism and the presumption that behind the scenes there is a nascent, if not fully enacted, ‘intelligence’.

The implications of these tools for assessment are very significant as they run the risk of increasing intentional and unintentional misconduct. In addition, beyond assessment, in the wider world, they may well contribute to the dissemination of misinformation, false accusations, libel, breach of copyright, insertion of erroneous computer code into systems, and other legal and ethical issues. Used well, they could offer benefits for learners, document preparation, media production, and even lead to newer forms of creativity. Clearly, a critical digital literacy which addresses the development and deployment of AI is essential for all of us.

In these guidelines, however, we will focus on assessment and have grouped together key information and suggested courses of action for staff, students, and higher education institutions in the short-term.

### What everyone needs to know

- (1) AI is becoming ubiquitous and embedded within more of the tools and software we use in everyday life and in research, learning, and teaching. The pace of change is rapid and it makes sense to anticipate further significant advances over the next few years. Browsers, word-processing packages, spreadsheets, presentation software, audio, imaging, graphics, and video tools are all increasingly making use of such technologies, including core product suites from Microsoft and Google. By default, users of these tools will be presented with ‘suggestions’ on anything which they write or design.
- (2) GenAI tools such as the ‘Large Language Models’ on which ChatGPT, Bard, and others are based, are designed to write well in terms of language, style, and syntax, rather than in terms of whether what they write is factually correct or accurate. It is crucially important to understand how such technologies work and be aware of their limitations as well as their apparent strengths. They are not ‘intelligent’ in any real sense, nor are they experts on topics, but rather largely rely on statistical predictions of word combinations or image features.
- (3) There are also concerns about ethical (and environmental/energy use) aspects in how such tools are developed, trained, and deployed and it is important to be aware of these, particularly with regard the lack of transparency on the information that has been used to ‘train’ the systems and whether copyrighted materials have been used and sources which are heavily biased. Some moves are being made



internationally to consider potential forms of regulation, although quite what shape these will take is very uncertain.

- (4) As technologies develop, appropriate roles in education may be found, but if they are used to bypass rather than support thinking, or used to acquire academic credit which has not been earned via real, intellectual engagement with the subject of study, then they can undermine the educational enterprise. Part of the current challenge for educators, learners, and institutions is to determine the range of beneficial applications which might be afforded by such tools.

### What lecturers and other educators need to know and can do

- (1) Ensure that you are aware of recent and new Generative AI tools, including those associated with supporting writing, and others which might be relevant to your particular discipline, such as those which assist the development of computer code, solve mathematical problems, generate graphics, video, and audio content, etc. Try to understand what these tools can and can't do (including by trying them out on your own assignments or subject content), and, in particular, avoid mistakenly attributing subject expertise, intelligence, or capacity for reflection to such software. It is useful also to be aware of ethical and legal concerns over how such tools are developed and used, as well as the potential inequality of differential access (e.g., on the basis of cost).
- (2) Increasingly, educators are sharing use cases of where AI tools might be useful in designing courses, lesson planning, assessment design, student feedback, etc. Whilst as the technology improves, there is no doubt that GenAI will be more useful in many professions and contexts, we still urge caution, particularly in terms of the accuracy of its outputs and the fact that it is largely based on statistical models and hence reproduces or mimics rather than being capable of generating original content. There are many cases where a traditional search strategy (using a search engine or library tools) is much more effective and has the added benefit of identifying original sources and allowing you to make judgements about accuracy and quality as well as to provide due credit to the original authors. This is a key point that should also be included in any training of students about information gathering and research.
- (3) If you are using GenAI tools in your own academic practice, then you should model appropriate use with your students, acknowledge where GenAI has assisted in your work, etc. It is important not to input personal, private, sensitive, or copyrighted materials (including student work) into such tools unless you have appropriate levels of legal guarantees. Many of the freely available tools at the moment do not have such protections in place.

- (4) In designing assessment, it is important to ensure validity, i.e., that assessment should be a means whereby each student demonstrates that they have attained the intended learning outcomes to an appropriate standard and that this should be the basis on which academic credit is awarded.
  - It is important to clarify and reiterate this point with students and to demonstrate how the assessment fits this intention.
  - It may be appropriate to revisit your original learning outcomes to ensure that they are aligned with how you teach, the tasks you set students, and the chosen forms of assessment.
- (5) If you intend for students to use GenAI or AI-supported tools in any assignment, make this clear. It may not be possible to simply state 'do not use AI for this assignment' given the technology's ubiquity, so the emphasis should be on what the student actually does to demonstrate their attainment of the intended learning outcome with which the assignment is aligned. If the student constructs a report or essay through clever 'prompt engineering' which could have been done by anyone not taking this module, then this does not provide the basis for an award of marks or credit. Where students are expected to use AI tools, ensure there is clarity on how and why they used such, with an appropriate declaration on any submitted assignments.
- (6) There will be cases where it is clearly inappropriate to use GenAI and, in those cases, state this clearly in the instructions provided to students and ensure that you are able to make the format of the assessment sufficiently secure and robust.
- (7) Academic Integrity is breached if students submit the products of GenAI as their own work without acknowledgement or without authorisation to use GenAI in fulfilling the task. It is important to ensure that students are informed that this constitutes academic misconduct and that they should only be seeking credit for work which they have produced themselves, and that they are responsible for correctly referencing and acknowledging sources and resources used in their work.
- (8) Review all assessments and assignments in terms of whether or not they are susceptible to being completed successfully by an AI tool without the student having to engage intellectually, or personally, with the subject. Some common types of assessment should be no longer considered to be sufficiently robust to award scores which count towards official grades. These may still be perfectly valuable for self-assessment and formative practice. These include:
  - Take-home essays, reports, or similar documents focused largely on subject knowledge content and with an 'all or nothing' submission by a single deadline and where marks are based on structure, style, and information;

- Online MCQs and other similar types of tests delivered online in un-invigilated and/or remote contexts, whether ‘live’ or asynchronous.
- (9) The capabilities of current AI systems are expanding rapidly, including the advent of plugins and connections with other tools and resources (search engines, mathematical engines, drawing packages, etc). This means that the range of assessment types that it can be used to support (or subvert) is extensive. Tasks such as developing a plan, a strategy, making a case, comparing and contrasting, inventing data for an experiment, plotting graphs, producing a slide deck on a topic, writing code, analysing data in spreadsheets, compiling a list of references, etc, are all within current capabilities. Simply trying to substitute one basic assessment type for another will not be sufficient to counter the challenge to assessment integrity. New assessments and assignments should instead focus on demonstration of personal and academic skills, validity and reliability, authenticity, and security.
- (10) Consider the balance between formative and summative assessment in your modules/courses, and between continuous assessment and examinations.
- Practice and formative feedback are key aspects of learning which can also help students develop self-efficacy and responsibility for their own learning.
  - It may be that you feel that a shift towards more weighting for assessments undertaken in an invigilated examination type environment is the option most readily available to you, at least in the short term, but do try also to consider what might be most educationally valuable alternatives and identify what design assistance or other support would be needed for such.
- (11) Do not rely on GenAI ‘detection systems’. None of the tools which are currently available are fully capable of detecting the use of GenAI (except in the most obvious cases which may also have been identified by expert reading and scrutiny) and may also lead to ‘false positives’ (incorrectly concluding that human-written text was AI-generated) and difficult-to-interpret scoring. Detection systems cannot be relied upon to detect use of GenAI accurately or consistently.
- In addition, there may be serious data protection, privacy, and intellectual property concerns in the use of any such tool, particularly if it has not undergone appropriate approval by institutions.
  - Turnitin’s detection tool is available in some institutions, but users should be aware of concerns about its capabilities in terms of more recent versions of GenAI, a reported high rate of ‘false positives,’ and some ambiguity on how to interpret its results.

(12) Consider what scope there is for assessments which:

- Focus on ‘process rather than product’. In other words, where credit is associated with the various tasks or stages that the student goes through in order to lead to the final product. This can be done by breaking down assignments into key stages and incorporating student reflection/ reporting on how they found their sources, what aspects they explored, what challenges they overcame, etc (or whatever is appropriate to the particular assignment) so that there is a developmental journey.
- Are clear in terms of whether the emphasis is on the development of writing skills (something the AI tools can do very well) or on understanding of the specific topic and assess each of these with appropriate methods and rubrics.
- Are reflective and based on personal/ professional experiences and which are authentic to the discipline or profession. Note that many of the AI tools will readily invent ‘reflective’ content if so asked, so try to ensure that the task is genuinely connected to the student, or the specifics of particular aspects discussed in class.
- Are in different or multiple formats, such as video or audio content, a mix of presentation (with questions and answers) and ancillary materials (e.g., reference list, handouts), etc. AI tools can produce slide decks and write scripts for video/audio

content, so, again, be careful about the requirements.

- Are based on whether the learning outcomes have been achieved by the student, rather than leading to a grade.
  - Use in-class writing assignments or problem-solving tasks.
  - Are based on, or partially include, an oral component in which the students are asked to answer questions around the topic and how they approached the task. There are many examples where orals have been used successfully, even in large class contexts, and in which there are particular formats (interactive orals for authentic assessment) which align with the discipline or profession. Where it isn’t practicable for a very large cohort, at least consider undertaking a number of orals either on the basis of random selection or to clarify any concerns in a particular submission (i.e., this is where the main assignment is an essay, report, video, etc, and the oral is to check on integrity and/or on student understanding).
- (13) Work with colleagues to develop an effective strategy for assessment which ideally would address issues of student (and staff) workload, the scheduling of deadlines/due dates, and ensuring that programme level outcomes are being met.
- We know that academic misconduct can arise when people inappropriately react to:
    - pressure and stress caused by too many overlapping deadlines;

- an amount of routine assessment that is so large, over the course of the semester, that it loses its perceived learning value to the student;
- lack of opportunities for resubmission or development of an assignment after feedback;
- perceived lack of consequence for such behaviour.

(14) Always comply with and follow your institution's academic integrity policy and report any suspected cases. Being consistent in policy implementation is something which will shape students' perceptions about the seriousness of the issue and that the policy is one which focuses on education and the development of professional values, reducing the potential for repeated misconduct and protecting the reputation of qualifications.

### What programme managers and institutional leaders need to do

- (1) Ensure that all staff are informed and kept up to date and provide training opportunities for all staff and students on these issues and technologies.
- (2) Review approaches to assessment across programmes to:
  - Identify and replace any existing practices which may be vulnerable to successful completion via the misuse of GenAI;
  - Consider the scope for greater focus on programme level outcomes and assessment, and the overall assessment workload;
- (3) Whilst it might seem that a switch from continuous assessment, coursework, and assignments back to traditional end-of-semester formal examinations is the easiest way to ensure the integrity of assessment this can run counter to the strength of more authentic assessment which aims to develop skills, knowledge in context, and other professional and graduate attributes. A short-term re-weighting of assessments may be necessary to respond quickly to these new challenges, but the longer-term goal should be to take a more holistic approach to assessment as/for/of learning.
- (4) Review policies on academic integrity and assessment to more effectively reflect and respond to these issues and take the opportunity to reiterate the valuable educational purposes of assessment.
- (5) Ensure that appropriate resourcing is available to support academic integrity.
- Develop a clear map of all assessments, assignments, and deadlines for students and staff in the programme or year cohort, and seek opportunities for synergies, rationalisation, and scope for enhancing formative feedback and supporting student development;
- Establish clear rubrics for assessments and aim for consistency of practice (where appropriate) and alignment with programme outcomes.

- (6) Refresh study/academic skills supports for students to provide clarity on acceptable as well as unacceptable uses of such technologies.
  - (7) Work as a sector on issues regarding technological developments, data protection, protection of IP, and ethics.
  - (8) Engage with QQI and other awarding or accreditation bodies on these issues and ensure that guidelines and regulations are clear to all staff and students.
  - (9) Foster an institutional ethos and culture (reflected in your communications) which emphasises integrity, honesty, trust, and respect, rather than let the conversations be dominated by suspicion, surveillance, and distrust.
- (2) Ensure that students understand what is required of them for any assignment or assessment, including the extent to which there is any allowable use of such technologies and how this may need to be acknowledged. All assignments and assessments are designed to determine whether students can demonstrate attainment of the specified learning outcomes of their module or programmes. In other words, the credit is awarded for their work not that of others or produced by GenAI systems or obtained from other sources. This means that students need to understand their institution's academic integrity policy and be able to clearly draw the line between what is permissible and what may constitute misconduct.

## What students need to know and do

- (1) AI (including so-called GenAI) tools are becoming widely available and embedded in many of the technologies which we use to write documents, analyse data, design presentations and to support learning. It is crucially important to understand how such technologies work and be aware of their limitations as well as their apparent strengths. They are not 'intelligent' in any real sense, nor are they experts on topics, but rather largely rely on statistical predictions of word combinations or image features. There are also concerns about ethical aspects in how such tools are developed, trained, and deployed and it is important to be aware of these.
- (3) Learning is about 'sense-making', about juggling ideas, trying to see where they fit or where they contradict, about rethinking what we thought we already knew, about seeing things in new ways. All of this can be difficult, students can feel vulnerable if something doesn't appear to be immediately obvious to them and they need to put in lots of effort or seek help for things to 'click into place'. It is not a weakness or a sign of lack of ability. It's what university-level education is about, but it should be counter-balanced by the sense of achievement and the new perspectives and skills that students ultimately acquire through this effort.

- (4) If a student is struggling, or feels under pressure, advise them to talk to their lecturers, tutors, SU officers, counsellors, or whoever is most appropriate. Advise them not to take 'short-cuts' with assessments that avoid them properly engaging with the subject, and to resist any the social media and other messages that come in from online 'cheating services' with 'promises of assignment support'. Students need to be encouraged to reach out and ask for support.
- (5) Being a student should be a time in which they can develop new perspectives, learn more about themselves and society, find opportunities to express their passions and creativity, identify where they can engage with community and help make the world a better place. Central to this is living up to values of trust, cooperation, integrity, and truthfulness, all of which are central to education and society.







# Further reading, links, and resources

## Part 3: Further reading, links, and resources

In producing these guidelines, we have been informed by a wide range of documents, policies, articles, and other contributions (including webinars, discussions, and conversations) from across the international educational community.

Some particularly useful further reading which we would recommend include:

1. **A Generative AI Primer**, by Michael Webb, JISC National Centre for AI, <https://nationalcentreforai.jiscinvolve.org/wp/2023/05/11/generative-ai-primer/>
2. **AAIN Generative Artificial Intelligence Guidelines**, Australian Academic Integrity Network (AAIN) Generative AI Working Group, March 2023, <https://www.teqsa.gov.au/sites/default/files/2023-04/aain-generative-ai-guidelines.pdf>
3. **Maintaining quality and standards in the ChatGPT era: QAA advice on the opportunities and challenges posed by Generative Artificial Intelligence**, The Quality Assurance Agency for Higher Education 2023, <https://www.qaa.ac.uk/docs/qaa/members/maintaining-quality-and-standards-in-the-chatgpt-era.pdf>
4. **European Commission, Directorate-General for Education, Youth, Sport and Culture, Final report of the Commission expert group on artificial intelligence and data in education and training** – An executive summary, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2766/65087>
5. **Unlocking the Power of Generative AI Models and Systems such as GPT-4 and ChatGPT for Higher Education: A Guide for Students and Lecturers**, Gimpel et al, 2023, [https://www.uni-hohenheim.de/uploads/media/23-03-20\\_Whitepaper\\_ChatGPT.pdf](https://www.uni-hohenheim.de/uploads/media/23-03-20_Whitepaper_ChatGPT.pdf)
6. **Turnitin Guide for approaching AI-generated text in your classroom**, <https://www.turnitin.com/papers/guide-for-approaching-ai-generated-text-in-your-classroom>
7. **101 Creative Ideas to use AI in education**, Nerantzi, C., Abegglen, S., Karatsiori, M. and Martínez-Arboleda, A. (Eds.) (2023) DOI: 10.5281/zenodo.8072950
8. **Five Principles for the Effective Use of Generative AI**, UTS, Sydney, <https://lx.uts.edu.au/collections/artificial-intelligence-in-learning-and-teaching/resources/five-principles-for-effective-ethical-use-generative-ai/>

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