

Centre for Academic Development & Quality

Learning, Teaching and Assessment with Generative Artificial Intelligence (AI): A Good Practice Guide

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1. Generative Artificial Intelligence at NTU

At Nottingham Trent University (NTU) our ambition is to be the most digitally sophisticated university in the UK. This digital future includes Generative Artificial Intelligence (AI) and so we need to guide NTU students in the fair and safe use of these tools. Generative AI is a powerful tool that impacts the future of both education and employment. Developing strategies to ensure student literacy in generative AI is essential, alongside the need to maintain academic standards and integrity of assessment practices. To do this, we need to develop ourselves to better support our students for the jobs of the future. This good practice guide provides an overview of some of the ways that generative AI can be used within learning, teaching and assessment contexts, and the staff development opportunities that have been designed to support this.

This Generative AI good practice guide provides supporting guidance in the use of generative AI in learning, teaching and assessment at NTU. To support the positive development of digital futures, NTU colleagues have a responsibility to develop and model effective practice within learning and teaching environment design, and the supported use of generative AI. This document provides NTU colleagues with practical and responsible guidance in assessment design and practice when using generative AI in learning, teaching and assessment contexts.

At NTU, <u>Microsoft Copilot</u> is the preferred generative AI product. This is included within the institutional Microsoft subscription and is aligned with the NTU digital ecosystem. By logging into Microsoft Copilot using your NTU login credentials, you can be assured that your use of the tool will be more secure than that of other generative AI services that operate outside of the NTU digital ecosystem.

A <u>Generative Al Information and Guidance Hub</u> has been developed to provide NTU colleagues with further information, resources, and formal guidance about Generative Al.

2. What is Generative Artificial Intelligence (AI)?

Generative AI (AI) refers to artificial intelligence systems capable of generating new content based upon input data. These tools are trained with large amounts of data scraped from the internet, or by directly accessing information from the internet to make predictions and generate new content. It is important to acknowledge that the data that these tools draw upon also includes a large amount of purchased data. This has the potential to contain bias. Generative AI tools are developing all the time and include AI multimodal generators such as Microsoft CoPilot, ChatGPT, Adobe Firefly (free to NTU staff with an Adobe Creative Cloud Licence), Google Gemini, Midjourney and DALL-E. While there are a wide range of generative AI tools available, at NTU, Microsoft Copilot is the preferred generative AI product due to the enhanced security offered when working within the NTU digital ecosystem.

Generative AI allows users to interact with it via text, images, videos and voice recordings through which you can 'chat' with the machine. The input you provide, which can be text, images or even your own voice (e.g. 'write me a 500-word short answer essay question on the importance of supply and demand in the market') is known as a prompt. These prompts

can be used to generate virtually any multimedia output. In the broadest sense, anything is possible, and the system is limited only by the prompts it is given. There are exceptions to this rule, where the system has been trained to recognise inappropriate prompts, and where prompts or their associated output may be offensive or dangerous.

The number, range and applications for Generative AI tools are likely to grow and develop beyond their current capabilities, with the potential to fundamentally alter the future of education and employment.

3. Learning and Teaching with Al

Generative AI brings both possibilities and challenges to the higher education learning and teaching environment. Generative AI literacy is something that we need to continue to develop as the technology adapts, and as we better understand the implications that this has upon learning and teaching practice and assessment design.

Generative AI performs well as a legitimate tool for generating initial ideas in the planning and preparation for academic work. However, the use of Generative AI also comes with limitations and challenges that need to be considered alongside its use. This section provides some of the dos and don'ts of generative AI use at NTU, an overview of some of its uses within learning and teaching contexts, alongside the importance of recognising the limitations in its use.

3.1 Generative Al Dos and Don'ts

Generative AI can be used as a tool to help us work more productively and creatively, however, it should not be relied on to fulfil the requirements of specific roles. The helpful list below has been designed to build confidence and supports NTU colleagues with ideas of what they can and cannot do when using Generative AI tools.

DO

- Log into Microsoft Copilot using your NTU credentials to ensure that you are using generative Al safely. Watch this short video to find out how to log into Microsoft Copilot.
- Do, if you wish, use generative AI tools as a complement to your own work. They should not be a replacement of your own skills and knowledge.
- Do make it clear when and how you have used AI when working with your students or producing your own content. Acknowledge when you have used Generative AI and reference it as a resource.
- Do <u>familiarise yourself with how these tools work</u>, so you can better understand their strengths and limitations.
- Do confirm the information it outputs for yourself. You can't trust that the information provided by AI tools is accurate.
- Do ensure that if you are hosting a session with external recipients, you always use the "lobby" functionality, and check attendees to ensure AI bots are not attending on behalf of individuals.

DON'T

- Don't give generative Al tools access to personal data, research data, copyrighted materials, or University intellectual property.
- Don't run software generated by AI code without fully understanding how it works and the actions it will perform. Much like you would not install conventional software from an untrusted provider, you need to be sure you know what AI code will produce or create.
- Don't use Al bots to attend meetings or sessions in your place or take notes for you. Do not allow your students to do this either. By doing this you could be sharing sensitive information with an external party that has not been approved.
- Don't use online AI content detectors as these may provide unreliable results and not comply
 with GDPR (General Data Protection Regulation). Content detectors are also biased against
 non-native English speakers, with a known tendency to produce false positives.

3.2 Using Generative AI within your Learning and Teaching

Generative AI presents significant developmental opportunities within higher education, and as we prepare our students for digital futures within the workplace. Generative AI can be used within higher education contexts in the following ways:

- 1. **Content generation** generation of educational resources including case studies, summaries and practice questions for use within learning and teaching.
- 2. **Curriculum design** providing initial ideas generation when developing curricula with skills of the future in mind. This can be useful when considering contemporary innovation within the distinct subject-discipline.
- 3. Content summarisation generative AI has the capacity to perform content summaries at speed. While this is not a substitute for engaging with the content in its entirety, the summarisation function provides a useful means of accessing knowledge quickly, particularly within time-poor contexts.
- 4. **Collaborative learning** generative AI can be used as a collaborative learning exercise within the classroom. Challenging your students to work in small groups to find out all they can about a given topic, using generative AI within a time-challenge context, is a fun way to engage your students in a collaborative ideas-harvest exercise. Reviewing their findings collectively offers an opportunity to critique the generative AI output together, while supporting your students in developing their own digital sophistication in the use of the technology.
- 5. Critiquing Al-generated content generative Al is not infallible, so it is important to test the validity of the content it produces. Critiquing generative Al output is an important developmental step in its effective use. Critiquing pre-created generative Al content is a good way of introducing your students to the benefits and disbenefits of the use of generative Al. By using pre-created content, this also means that your students do not need to sign up for external generative Al accounts.
- 6. **Personalised learning** generative AI can offer useful indicators for the ways in which you can tailor educational your content to meet the individual and diverse needs of your students.
- Support with grading generative AI can support you in the generation of multiple-choice quizzes on specific topics. Clearly, these will need to be reviewed for accuracy and reviewed for accessibility.
- 8. **Feedback generation** generative AI can be used to create feedback templates in line with module learning outcomes.
- 9. **Accessibility** Al can be used to generate content within alternative formats (e.g. audio and braille content). Al can also be used to support communication between international students and tutors, where language barriers exist.

10. Virtual tutors – chatbots can be created to answer queries and offer guidance. At NTU we have already developed this technology with Trent, the digital assistant*
* An initial draft of this list was created using Generative AI (Microsoft Copilot, 2024b)

While generative AI can very quickly provide an initial primer on a subject, topic or theme, it is important to recognise that these systems are not infallible, and the content generated by them will need to be tested and critiqued.

3.3 Limitations of Using Generative AI within Learning and Teaching

The use of Generative AI within higher education contexts necessitates careful consideration of its limitations, alongside its use, some of those limitations are detailed below:

- 1. **Checking for Accuracy** while generative AI has the capacity to generate content at speed, it is important to check the content generated for accuracy. As generative AI draws upon large volumes of content, if the content it is drawing upon to create that content is inaccurate, then so will the output content that it generates in response.
- Academic Integrity a key area of concern with the use of generative AI is where students
 are producing work using these tools and then submitting it for academic credit. While
 courses at NTU should look to support students in the appropriate use of generative AI, it is
 never acceptable for students to submit work they have not independently produced for
 academic credit. For more information, see the NTU Academic Integrity Policy (Quality
 Handbook Section 17C).
- 3. Limited Breadth of Inclusion generative AI output is only as good as the source information that it draws upon. As the data that generative AI uses is largely based upon Western and Eurocentric knowledge, this means that diverse voices and global knowledge is often inadvertently obscured within the data produced. One way to mitigate against this is to ensure that the prompts you use include an acknowledgement of the desire to draw upon global and diverse knowledge frames.
- 4. **Distorted Learning and Teaching Priorities** if too much emphasis is placed upon the use of generative AI, the loss of human interaction and engagement can result in skewed learning and teaching priorities. When encouraging the use of generative AI, ensure that this is best placed for your context.
- 5. Digital Divide not all students will have equal access to technology. Generative Al tools assume digital literacy and reliable internet access, while some models require a monthly subscription. To mitigate against this challenge, at NTUSecretart all staff and students have free access to Microsoft Copilot. To support your students in developing their digital literacy, you can encourage the exploration of generative Al outputs within your classroom together, as well as providing basic support for the development of appropriate prompts. By ensuring that all students are aware of how to use Generative Al well, this can ensure equity of experience for all students.
- 6. **Student Unwillingness to Engage** some students have expressed a preference not to engage with Generative AI technologies. As Generative AI is likely to be a feature of the future workplace, it is important that we encourage our students to understand and engage in its use within distinct subject-discipline contexts, without mandating its use. To support this, you can demonstrate the use of Generative AI within the classroom, or pre-prepare content created by Generative AI for your students to use within a supported classroom context.
- 7. **Different Understandings of AI Use in Assessment** if we are not clear, students may have different understandings about when they can and cannot use generative AI. This is particularly important with assessments. To support this clarity, each Assessment Brief should include guidance for students about when they can and cannot use generative AI, or when they can choose to use it. This should be supported with a student declaration of generative

- Al use at the point of submission. The student declaration should acknowledge how generative Al has been used in the preparation of their assessment. This could include the submission of generative Al prompts used as a set of appendices.
- 8. **Differing Graduate Skills** if generative AI is used inconsistently across Higher Education institutions, this will lead to disparities in graduate skills and competencies. At NTU, our commitment to support students in their use of generative AI will enhance their digital confidence for the future of employment.
- 9. Superficial Engagement with Artificial Intelligence there is a danger that individuals will dismiss generative AI if it does not immediately produce coherent academic responses to single prompts. To encourage development in its use, it is recommended that we provide students with opportunities to explore the capabilities of the technology within a supported classroom environment.
- 10. **Ethical implications** while we know that generative Al currently lacks an awareness of context and by association the ability to generate content with ethical accuracy, it is important that one of the steps in working with students, is an analysis of the outputs' ethical positionality.

*An initial draft of this list was created using Generative AI (Microsoft Copilot, 2024a)

3.4 Engineering Good Prompts using Generative Al

Generative AI outputs are only as good as the prompts used to generate them. Creating effective prompts for generative AI involves understanding and clearly defining the role that you want the AI to play, the task you expect it to perform, the constraints it should respect, and the data it can utilise. Below is a short guide on creating good prompts using the Role, Task, Constraints, Data (RTCD) approach:

- 1. **Role** define the role of the AI. What do you expect the AI to be in the context of your prompt? Is it a creative assistant, a data analyst, an educator, or something else? Clearly defining the role helps in setting the right expectations and tailoring the prompt to elicit the best response from the AI.
- 2. **Task** specify the task you want the AI to accomplish. This involves detailing what you expect the AI to produce as a result of your prompt. It could be writing a poem, generating an image, summarising a document, etc. The task should be clearly defined so that the AI understands the goal and can provide a focused response.
- 3. Constraints outline any constraints or guidelines the AI should follow. This could include limitations on length, style, tone, specific do's and don'ts, ethical considerations, or any other boundaries you want to set. Constraints help in narrowing down the scope and ensuring the output meets your requirements or limitations. For instance, you might specify that the language should be professional, the content must be suitable for all ages, or certain topics should be avoided.
- 4. Data (optional) define the data context or the input information the AI has at its disposal to execute the task. This could include providing background information, or supplying specific data points that should be considered or integrated into the output. The more relevant and precise the data you provide, the better the AI can tailor its response to your needs. For example, if you want the AI to write an article about renewable energy trends, providing the latest statistics or mentioning key regions of interest would be helpful.

Example - "Act as a creative writer (**Role**), your task is to compose a compelling short story (**Task**). The story should be set in a futuristic city, be no longer than 500 words, maintain a suspenseful tone, and avoid any explicit content (**Constraints**). Incorporate the following

elements: a protagonist who discovers a mysterious device, a secret society, and a dilemma involving a choice between personal gain and public good (**Data**)."

3.5 Generative Al and the Future World of Work

Generative AI is having a powerful impact upon the world of work, and Higher Education providers play an influential role in preparing students for the safe and effective use of generative AI through the learning and teaching experiences that we design. The UK Government Secretary of State for Science, Innovation and Technology acknowledges how 'The world is on the cusp of an extraordinary new era driven by advances in Artificial Intelligence (AI)' (DSIT, 2024), while the UK Government's 'pro-innovation' and 'pro-safety' approach to AI futures advocates the need to prepare for both the AI systems of today, alongside the accelerated AI developments of the future (DSIT, 2024). This perspective is echoed by the World Economic Forum (2023b: 3) who frame advances in Generative Al as 'a paradigm shift in how we interact with information', while acknowledging the significant impact these technologies could have upon 'jobs and the future of work.' Within The Future of Jobs Report 2023, the World Economic Forum (2023a: 5) reinforce how 75% of companies are looking to enhance technology adoption, including AI, within the next five years. In this context, digital sophistication remains an ongoing developmental priority for NTU, and in the support provided for students and colleagues in the adoption of emerging technologies, including AI, within learning, teaching and assessment.

4. Generative AI in Assessment Practice

4.1 Generative AI in Assessment Practice Dos and Don'ts

The use of generative AI in assessment practice can significantly enhance and diversify the learning experience, and integrating generative AI into your assessment practice offers innovative way to enhance the teaching and learning process. The technology can support the creation of dynamic assessment materials, including the creation of complex scenarios and case studies. Advances in generative AI have encouraged a rethink of assessment practice and some degree of assessment review is recommended. The list below has been designed to build confidence and support NTU colleagues with ideas of what they can and cannot do when using Generative AI in Assessment Practice.

DO

- 1. Log into Microsoft Copilot using your NTU credentials to ensure that you are using generative Al safely. Watch this short video to find out how to log into Microsoft Copilot.
- 2. Retain information security and data privacy when using generative Al. E.g. Do not input GDPR data, student work or internal NTU documents into generative Al tools.
- 3. Experiment with Microsoft Copilot and free versions of other generative AI tools to test their capabilities and see what they can produce. E.g. <u>ChatGPT</u>, Adobe Firefly (free to NTU staff with an Adobe Creative Cloud Licence), <u>Google Gemini</u>, <u>Midjourney</u> and <u>DALL-E</u>. While it is fine to try other generative AI tools, Microsoft Copilot is the NTU preferred generative AI tool.
- 4. Develop your skills in effective prompt engineering to make the most efficient use of generative AI.
- 5. Experiment with the use of generative AI within learning and teaching contexts. You should use this as a guided learning experience with your students. Make sure that you are logged

- into Microsoft Copilot with your NTU credentials to ensure digital safety. The <u>PAIR Framework</u> (developed by King's College London) offers a useful reflective tool when using generative AI.
- Use generative AI to generate initial ideas for assessments and presentations. The final work produced should be your own, and the use and extent of generative AI use should be clearly articulated and referenced.
- 7. Input assignment questions and sample examination questions into Microsoft Copilot to test the output generated in response to the prompts provided. You can review the output in collaboration with your students as an evaluative exercise.
- 8. Consider adjusting your assessments with a focus upon the creative process of learning and reflection, rather than the evaluation of an end product. Treat this review as an opportunity to reflect upon whether the current assessment is the best method for evaluating student performance for the task or skill being undertaken and evidenced.
- 9. Adhere to the institutional guidance surrounding academic integrity, modelling your own adherence to best practice guidance, ensuring that you reference your use of generative AI.
- 10. Use generative AI to support you in the creation of Multiple-Choice Questions (MCQs) or for expanding questions banks. Generative AI can be used to inspire your thinking and establish initial ideas.
- 11. Use generative AI to support you in the creation of complex and realistic case studies, simulations, and scenarios for use within learning, teaching and assessment contexts.
- 12. Review content generated using generative AI for accuracy and ethical implications prior to sharing.
- 13. Retain an accurate record of where and how you have used generative AI, including the tools and prompts used, alongside copies of the outputs generated.
- 14. Be clear with your students about how they can and cannot use generative Al on your course. Include a statement about acceptable use within assignment briefs and module guides.
- 15. Your Course/ School may also include an acknowledgement statement on generative Al use for submitted work. For example, this may take the form of a signed student statement, that includes a declaration on generative Al use, and is submitted alongside assessed work.

DON'T

- 1. Panic! It's important to acknowledge the profound changes that generative AI is having upon the learning landscape and employment, but these challenges are not unique to Higher Education or NTU. The more that we collaborate across the sector and with our own students, the more positive the learning experience and engagement with generative AI is likely to be.
- 2. Assume that students will be conversant with generative AI tools and the implications for their use.
- Assume that all assessments need to change. Consider adjusting assessment to focus upon
 the process of learning rather than the end product. An emphasis upon authentic
 assessments that reflect the reality of the world of work, creative processes and reflections
 upon those experiences are recommended.
- 4. Use unsupported web-based tools that claim to detect Al-generated text (unless for experimentation with text that is yours or freely available online).
- 5. Input GDPR data, student work or internal NTU documents into generative AI tools.
- 6. Overestimate generative AI capabilities. AI use should complement what we do, not replace the work we create.
- 7. Assume any materials created by generative AI will be factually accurate.
- 8. Misrepresent output generated by generative Al. Al generated content should not be represented in its entirety without review, reflection and adaptation.
- 9. Ignore the potential for biases in outputs.
- 10. Ask students to purchase subscriptions for any tools.

- 11. Pay for any tools unless you have explored alternatives and are fully aware of the cost and data implications.
- 12. Forget to reference your own use of generative Al.

4.2 Designing Assessments in the Era of Generative Al

It is very difficult to make assessments AI proof. Instead, we need to work with the limitations of AI while still providing effective assessments. We need to:

- Build critical thinking into our assessments that are proportionate to a student's level of study.
- Ensure our assessments have applications to real-world settings, where possible.
- Avoid simple knowledge checking assessments that are vulnerable to Generative AI usage.
- Incorporate Generative AI into our assessment design so that literacy in this area is promoted.
- Consider a strategy for how Generative Al literacy is promoted at a course level.
- Promote the fair use of Generative AI, where it is used effectively, ethically and transparently.
- Train students to acknowledge when, and to what extent, Generative AI has been used.

4.3 Adjusting Your Assessments in Response to Generative Al

Before making any changes to assessments on your course, please re-familiarise yourself with NTU's Assessment Policy (Quality Handbook Section 15: Assessment), ensuring that the proposed change continues to adhere to NTU principles and requirements. Once you have identified any changes that you may wish to make, you should then refer to Quality Handbook Supplement 5A: Requirements for approving changes to courses to identify whether the anticipated change is low, medium or high impact.

Different types of change will require different consultation and approval method. Integrating generative AI into a module assessment schedule is likely to be a medium impact change, while integrating generative AI into a course assessment schedule is likely to be a high impact change. As outlined within the Quality Handbook, 'The approval route for changes to a course or module is dependent upon the extent of the change and/or the potential impact on standards or on the student experience.' (QH Section 15: 3.1) Please refer to the table contained within Quality Handbook Supplement 5A: Requirements for approving changes to courses which details different types of changes and their associated approval routes.

4.4 Examples of Using Generative AI in Assessment Practice

The examples below provide some ideas of generative AI has been used across the HE sector. When reviewing these examples, please note that Microsoft Copilot is the preferred generative AI product at NTU. This is included within the institutional Microsoft subscription and is aligned with the NTU digital ecosystem. By logging into Microsoft Copilot using your NTU login credentials, you can be assured that your use of the tool will be more secure than that of other generative AI services that operate outside of the NTU digital ecosystem.

Examples of generative AI use beyond NTU include:

Assessing the role of ChatGPT in Assessment Practices (Edge Hill University) – Staff
members input one of their assignment titles into the AI system. The generated outputs were
independently evaluated by colleagues from the same subject area to ascertain if they would
pass, and if so to what extent

- Enhancing Assessment Literacy using Generative AI (Northumbria University) Staff
 used generative AI is formative assessment. Students were offered case study scenarios and
 asked to develop prompts that enable generative AIs to generate a response. Students and
 staff critiqued the prompts and responses collaboratively to build critical thinking while
 improving assessment literacy.
- Categories of Al Use in Assessment (University College London) Provide clear
 categories of Al use for assessment purposes. <u>UCL have created a framework</u> that clarifies
 where Al tools cannot be used, where the tools can be used in an assistive role and where Al
 tools play an integral part in assessed student work.
- 4. Using Al to Engender Critical Thinking in Session Planning and Design (Roehampton University) Staff used generative Al to produce lesson plans for discussion and critique to develop greater criticality around session planning and design. Staff produced content and stimuli for use with students, and asked students to generate content around different themes for analysis and evaluation.
- 5. **Revise Exam Questions** (University College London) Shift in question type to pose hypothetical questions with no simple answer, or scenario-based questions for student problem solving.
- 6. **Revise Essay Questions** (University College London) Adjustment of assessment to shift the focus to personal experiences and reflections to record development in thinking or requiring that students write for a specific audience.
- Convert Generic Questions to Scenario-Based Questions (University College London) –
 Consider what action is required of the student and the extent of the evidence that they need
 to provide.
- 8. **Upgrade of Multiple-Choice Questions** (University College London) Increase in complexity of MCQs, incorporating the use of images and asking students to include their workings, or submission of audio responses that include a rationale for their thinking.

4.5 Preparing Students for Using Generative AI in Assessed Work

It is important to be clear about the expectations for the use of generative AI on your course, and the acceptable expectations for use within specific subject discipline contexts. These expectations will differ based upon the nature of the course and expectations of the industries and sectors within which your students will go on to work. Where possible, you should aim to mirror sector expectations of AI use within your delivery of the course.

Setting clear expectations is particularly important when it comes to assessed student work. In line with the institutional requirements for academic integrity, students should always be encouraged to acknowledge their own work and where their ideas have been informed by those of others.

5. Referencing the Use of Generative Al

5.1 Referencing the Use of Generative Al

When using generative AI, it is important to acknowledge where this has been used to generate initial ideas and content. Generative AI should not be used as replacement for academic research. To acknowledge this, a reference for its use must be included. The NTU Harvard Referencing Guide has been updated to include guidance on how to cite generative AI.

You will see that we have referenced where generative AI has been used in this document. For each instance, we have provided an appropriate indicator of how it has been used, alongside a reference for where and how we accessed the information. These items have been included in the reference list. In the production of this guide, we used the NTU Harvard Referencing guidance on how to how to cite generative AI. You should use this referencing guide with your students.

Generative AI content should never be used as a replacement for you own thinking and ideas, but can offer a useful prompt for developing your own content.

6. Generative AI and Academic Integrity

6.1 Preparing Students for Using Generative Al Safely

Generative AI is already a tool that is a part of the workplace, and we need to prepare students for its safe, responsible, and effective use. At NTU, <u>Microsoft Copilot</u> is the preferred generative AI product. This is included within the institutional Microsoft subscription and is aligned with the NTU digital ecosystem. By logging into Microsoft Copilot using your NTU login credentials, you can be assured that your use of the tool will be more secure than that of other generative AI services that operate outside of the NTU digital ecosystem.

You should build in opportunities to experiment with generative AI within the learning and teaching environments that you create. Engage in the available staff development to support you to do this (see Section 7: Accessing Help and Support).

6.2 Generative AI and Academic Integrity

Within Advance HE's predicted growth of AI within the learning landscape (Knight, 2024) and the growing evidence-base of innovative practice generated within <u>Advance HE's AI Garage</u>, it is important to balance the potential opportunities offered by AI innovation within the learning landscape and the parallel need to maintain academic integrity. The <u>Quality Handbook Section 17C: Academic Integrity Policy</u> clearly outlines the expectations for maintaining academic integrity at NTU.

This policy highlights the requirement for students to maintain good academic practice by 'acknowledging what's your own work, and where ideas or contributions came from others' and cautions against 'presenting others' work as your own, whether that work was produced by a person or a machine.' (QH Section 17C: 1.2) The Quality Handbook Section 15:

Assessment also outlines how, 'In all cases work submitted by a student must be their own work and any use of a third-party proof-reader or proof-reading or editing service must not compromise the authorship of the work submitted.'(QH Section 15: 13.23)

6.3 Potential Problems with Generative AI and Academic Integrity

Academic Integrity is a common concern around Generative AI; that students may be producing work using these tools and then submitting it for academic credit. During the 2022-2023 academic year there were a limited number of cases where this happened at NTU, with the work processed as Academic Irregularity cases. Although courses should look

to encourage the appropriate use of generative AI, it is never acceptable for students to submit work they have not independently produced for academic credit.

There is currently no reliable means of automatically detecting generative AI in student work. Although there is active development in this area, it may be some time before a robust detection system is developed. Staff should remain vigilant when reviewing student submissions, and follow guidance on detecting and processing suspected Academic Integrity violations.

Under the current NTU Academic Integrity regulations, using generative AI inappropriately may be processed by School Academic Integrity Leads as a case of Academic Misconduct (Software-based Text or Image Modification) or as a case of Serious Academic Misconduct (Contract Cheating) depending on the nature of the issues in a student submission.

The <u>NTU Academic Integrity Policy (Quality Handbook Section 17C)</u> can be accessed via <u>MyHub</u>.

6.4 Generative AI and AI Detectors

There is no reliable way to detect if text has been created by generative AI. Most generative AI checkers operate by identifying 'unnatural' English, which presents several significant drawbacks. Firstly, these tools are prone to false positives. This particularly affects multilingual speakers, whose writing may naturally differ from expected English language norms. Secondly, while these detectors may catch older and free AI-generated text, they often fail to identify content produced by premium AI services. This creates inequity as more affluent students, who can afford premium memberships, are less likely to be caught if they cheat.

Relying on AI detection tools can provide a false sense of security. The latest free AI text generators already produce text that is indistinguishable from human writing, effectively closing the detection window. Additionally, students who use older AI tools can easily evade detection by crafting well-thought-out prompts, or refining their text by using grammar and language tools like Grammarly. Reliance on generative AI text detectors is ineffective and potentially unfair. Generative AI detectors should not be used at NTU.

7. Accessing Help and Support

7.1 Staff Development for the Use of Generative Al

The use of generative AI will vary across NTU. Colleagues are advised to follow relevant School guidance to understand how Generative AI tools can be used and referenced.

<u>Artificial Intelligence in Learning and Teaching</u> is a staff development offer that is delivered collaboratively across the Educational Development and NTU Flex Teams in the Centre for Academic Development and Quality. This staff development offer outlines opportunities to build confidence and enhance the use of AI within learning and teaching contexts.

This develop includes the following sessions:

- An introduction to Artificial Intelligence
- The Use of AI within Pedagogic Contexts
- Al and Assessment Design
- Advanced Al Practice
- Ethical Considerations in the Use of AI

You can access the staff development for <u>Artificial Intelligence in Learning and Teaching</u> via Thrive at NTU.

For guidance around the use of generative AI for learning and teaching, email Flexiblelearning@ntu.ac.uk

For specific queries on when to use or not to use generative AI, contact <u>DT Service Desk</u>

For reporting an Al-related Data Breach, please us the NTU data breach or incident form.

7.2 TILT Generative Al Group

TILT Artificial Intelligence Practice and Scholarship Group

Generative AI is a powerful tool that has the potential to fundamentally alter not just education but to impact upon multiple different areas of employment. It is vital that we develop strategies to ensure students are literate in Generative AI as this will increasingly be expected by future employers. While encouraging this literacy, we must maintain the overall standards and integrity of our assessment practices. If you have a project, or you would like to explore incorporating AI into your learning and teaching you can request to join the TILT Artificial Intelligence Practice and Scholarship Group by emailing TILTAI@ntu.ac.uk.

8. Tools and Resources

Generative AI by its nature is developing all the time. The tools and resources detailed below provide some additional guidance and support you in using generative AI effectively within your own learning and teaching context.

Generative AI Resources

JISC National Centre for AI – A Generative AI Primer

JISC AI Use in Assessments: Protecting the Integrity of Qualifications

NTU Generative Al Information and Guidance SharePoint

NTU Harvard Referencing Guide

QAA Generative Artificial Intelligence

TILT Generative AI Practice and Scholarship Group email TILTAI@ntu.ac.uk to join

World Economic Forum Al Governance Summit 2023

9. References

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