Artificial Intelligence Software and Academic Integrity

Guidance Document

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# Introduction

Recent developments in artificial intelligence (AI) software have seen the development of Large Language Models (LLMs), that can be accessed online, often free of charge via Chatbot (an often internet-based computer programme designed to simulate human conversation). The development of this technology in relation to academic integrity has been covered by the QAA [here](https://www.qaa.ac.uk/news-events/news/qaa-briefs-members-on-artificial-intelligence-threat-to-academic-integrity).  The most well-publicised of these developments is the ChatPGT tool.

The University does recognise that the advent of ChatGPT and other AI Chatbots/technologies increases the opportunity for academic dishonesty, and will require the University to review and update its regulations to include specific guidelines and protocols related to the use of AI software, and in particular related to summative assessment. However, it is also noted here that used in the “right” way these tools can be used pedagogically to support learning and academic development. This document has been written to advise staff on:

1. The University’s overall position on the use of AI technology in assessment and associated longer-term strategy.
2. How to approach issues linked to the use of AI technology in assessments during the 2022/23 academic year.
3. Guidance for the 2023/24 academic year regarding assessment and AI technology.

# What is ChatGPT?

The launch of ChatGPT in November 2022 has been a cause of concern for the HE sector. This AI-powered Chatbot is able to generate well-formulated answers to a variety of assessment style questions and tasks within a matter of minutes. ChatGPT uses OpenAI’s language model GPT-3 (and now GPT-4), which enables it to produce work that reads as though it has been written by a human making it at times difficult to detect that the work has been generated by an AI programme. ChatGPT is highly sophisticated and is capable of producing work of a good standard. For more click [here.](https://www.hitc.com/en-gb/2022/12/08/how-to-use-ai-essay-writer-chatgpt-to-write-your-papers-in-seconds/) OpenAI (ChatGPT’s creator) have an *overview for educators*, which can be found [here](https://platform.openai.com/docs/chatgpt-education). One interesting point to note from OpenAI’s overview is that: “*One example of why ChatGPT may not always provide accurate answers is that its training data cuts off in 2021. This means that it is unaware of current events, trends, or anything that happened after that point in time. It will not be able to respond appropriately to questions or topics that require up-to-date knowledge or information. For example, it may not know who the current president of the United States is or what day it is*”.

It is also worthy of note, that a growing body of work has discussed issues around inclusivity in relation to LLMs. For example, these relate to inclusivity and equality of access to the technology and the potential of LLMs to under-represent some languages. However, in a positive context, LLMs have been described as having the potential to improve inclusion for people with a disability and/or those working through a second language.

# General Guidance on AI use in assessment

1. The use of AI Chatbot technology in assessment has the potential to contravene Bangor’s [Academic Integrity Procedure](https://my.bangor.ac.uk/regulations/procs/documents/BUProc05-2019v3.3.pdf) through breaching requirements for honesty and through representing an action that falls “…within the general definition of academic misconduct” (see point 4 below). It may in addition exemplify instances of plagiarism, contract cheating and/or use of an essay mill.
2. However, the **University’s position** is that there will **not be an outright ban** on the use of the technology in teaching and assessment (but see point 4 below). This is based on the grounds that:
	1. As AI technology becomes an ever-increasing part of society and employment, it is important education embraces its use, where appropriate, whilst working to maintain academic integrity (Clarence-Smith, 2023).
	2. AI technology provides academic staff with an opportunity to create new innovative forms of assessment which may in fact benefit from the use of AI technologies (Goh, 2023).
	3. As noted by the European University Association (EUA) (2023), “*it is clear that banning the use of AI tools and other new technologies would be futile. Consequently, the higher education sector must adapt its learning, teaching and assessment approaches in such a way that AI is used effectively and appropriately*”.
	4. At present it is not possible to control the use of AI Chatbots through surveillance technology. Whilst there have been reports of apps that can detect the use of AI Chatbots are in development and Turnitin have stated that its software will learn to detect AI generated work, Chatbot technology is likely to develop rapidly, exceeding the capabilities of detection software.
	5. AI technology is becoming increasingly embedded within ‘everyday’ software (e.g. MS Word) and this will continue to increase. Therefore, attempts to ‘ban’ use of AI technology will become increasingly difficult and complex.
3. The requirements for specific, professionally accredited programmes may mean that specific guidance regarding the use of AI technology may need to be given to students. This may include a restriction on its use.
4. The University appreciates the complexity of the issue and the potentially blurred boundaries involved. A **guiding principle** is that text submitted for assessment should not have originated from AI technology. This would be a **dishonest use** of the technology and should be penalised under the University’s Academic Integrity Procedure. Note: there may be instances where a validated assessment requires students to utilize AI technology to produce text for assessment.
5. Moving forward, the **University’s strategy** is that:
	1. AI technologies will continue to develop at a rapid rate over the next few years, therefore we should embed their appropriate use into our module assessments to ensure that “…*graduates are equipped for labour markets that are changing due to digitalisation and new technologies, in particular artificial intelligence*" (EUA, [2021](https://eua.eu/downloads/publications/universities%20without%20walls%20%20a%20vision%20for%202030.pdf)).
	2. Assessment design should be reviewed and revised so that learning outcomes cannot be met solely through the use AI technology. Assessment design is potentially the most effective method of reducing the likelihood of the dishonest use of AI technology in assessment.
	3. We will work in partnership with students to develop and embed training in the responsible use of AI technology in curricula and training on academic integrity.

# Guidance for the 2022-23 academic year

1. For the current academic year assessment types **should not be changed**. However, if specific questions have yet to be released to students (e.g. for an online exam), staff should consider if amendments are appropriate. Some approaches to make it more difficult for students to use AI tools unfairly could include:
	1. Using a multimedia source, slide or image as the ‘prompt’ for a question.
	2. Asking for rationalized opinions/arguments/critique.
	3. Requiring specific bibliographic references — at present (although this may change) large language models are currently unable to accurately cite work, and often create fictionalised, plausible references

# Guidance for the 2023-24 academic year onwards

1. Schools should reflect on the possible uses of AI technology and decide how they wish to incorporate it into the teaching within their programmes and modules. As part of this, Schools should review and revise **assessment designs** so that assessments cannot be completed (and learning outcomes cannot be met) solely through the use AI technology.
	1. School Directors of Teaching and Learning should provide appropriate oversight of this process so as to ensure consistency and clarity of information.
2. Where necessary decisions should be informed by the requirements of any Professional Regulatory and Statutory Bodies.
	1. The professional or accreditation requirements of specific programmes may mean that it is necessary for Schools to establish uniform policy on the use of AI technology across all of their degrees/modules, which may include a prohibition on their use.
3. There are several ways in which assessments can be designed to reduce the potential for students to solely rely on AI technology. The following article [here](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4300783) provides some useful ideas and guidance, which could be considered along with the following:
	1. Employing forms of assessment that enables students to demonstrate their knowledge and subject skills in a non-text-based assignment e.g. oral presentation, panel discussion, poster presentation, creating a diagram.
	2. Appropriate use of in-person exam assessments, but considering the exam formats that move beyond solely ‘closed-book’ formats, for example, using open-book exams.
	3. Focusing the assignment on the most recent developments in your field, as this will limit the amount of information that is currently available about the topic online.
	4. Basing assessments upon experiential activities, such as seminars, fieldwork, practicals or other in-class activity. Here student will need to work with information/data/content that has been gathered as part of an activity.
	5. The use of artefacts that are generated as part of teaching and learning activities, e.g. field and laboratory notebooks, compositions, multimedia products, reflective diaries.
	6. Requiring students to reflect on feedback as part of the assessment process or to critique a particular source. For example, it can be beneficial to create assignments that invite students to critically respond to an essay (or other) written by an AI Chatbot. This assignment would allow students to analyse and evaluate the work produced by an AI Chatbot assessing it for accuracy and offering alternative arguments/approaches to the topic being explored.
4. Assessments should continue to be designed to be inclusive for all students. If AI technology is being used as part of a validated assessment, it should be ensured that the relevant software is accessible for all students completing the assessment.
5. Research suggests that students are less likely to engage in dishonest practices or use AI technology when they:
	1. Are able to recognise how completing an assignment will help them to meet the module/programme learning outcomes and strengthen their knowledge and skills that can be used across other modules.
	2. Have been provided with the opportunity to produce a draft of the assignment or preliminary work on the topic.
	3. Have a genuine interest in the topic that they are researching.

# Key actions for academic staff

1. **Try out [ChatGPT](https://chat.openai.com/%22%20%5Ct%20%22_blank), for example** enter a past assessment title/question and see what is produced.
2. If applicable, consider if the question design for any remaining 2022-23 assessments could be revised (see 2022-23 guidance above).
3. Start to think about assessment design for next year onwards (see 2023-24 guidance above).
4. Use the principle that it would be a **dishonest use** of AI technology where text submitted for assessment originated from AI technology.
5. Where you believe dishonest use may have occurred, report this to the Academic Integrity Officer in your School.

# Further Reading

* Clarence-Smith, L, (2023, February 3), Universities must embrace ChatGPT and not fight it, says Cambridge scholar, *The Telegraph*, <https://www.scribbr.com/citing-sources/cite-a-newspaper-article/>
* European Universities Association (2021), Universities Without Walls: a vision for 2030. <https://eua.eu/downloads/publications/universities%20without%20walls%20%20a%20vision%20for%202030.pdf>
* European Universities Association (2023), Artificial intelligence tools and their responsible use in higher education learning and teaching, <https://eua.eu/downloads/publications/position_ai%20in%20lt.pdf>
* Frederick, J, (2023, January 30), Hartford Courant: Jenny Frederick on ChatGPT, *Hartford Courant,* https://poorvucenter.yale.edu/news/hartford-courant-jenny-frederick-chatgpt
* Gleason, N, (2022, December 9) ChatGPT and the rise of AI writers: how should higher education respond?, *The Times Higher Education,* https://www.timeshighereducation.com/campus/chatgpt-and-rise-ai-writers-how-should-higher-education-respond
* Goh, C, (2023, February 7), University professors in Singapore keen on ChatGPT, which they say can help students ask better questions and raise critical thinking, *M Today,* <https://www.todayonline.com/singapore/university-professors-singapore-keen-chatgpt-which-they-say-can-help-students-ask-better-questions-and-raise-critical-thinking-2102461>
* Quality Assurance Agency (2023), The rise of artificial intelligence software and potential risks for academic integrity: A QAA briefing paper for higher education providers, <https://www.qaa.ac.uk/news-events/news/qaa-briefs-members-on-artificial-intelligence-threat-to-academic-integrity>
* The e-Assessment Association, (2023, February), AI & ChatGPT: Challenge or Opportunity for e-Assessment?, *e-Assessment Association,* <https://www.e-assessment.com/news/ai-chatgpt-challenge-or-opportunity-for-e-assessment/>