#### Artificial intelligence and academic conduct

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# What to expect

- Scope: Different types of tools with artificial intelligence
- Appropriate and inappropriate uses by students
- Our institutional response to these advances
- Your questions and feedback



#### The arms race

#### **Perceived threat HE Sector responses** Text matching software > deception eg white text > Plagiarism Turnitin red flags & new features Contract cheating checklists Contract cheating Detection software > blanking metadata Changes to regulations & guidance Don't panic!! Artificial intelligence Teach students use the tools ethically But introduce clear guidance, controls and constraints



### How we are responding

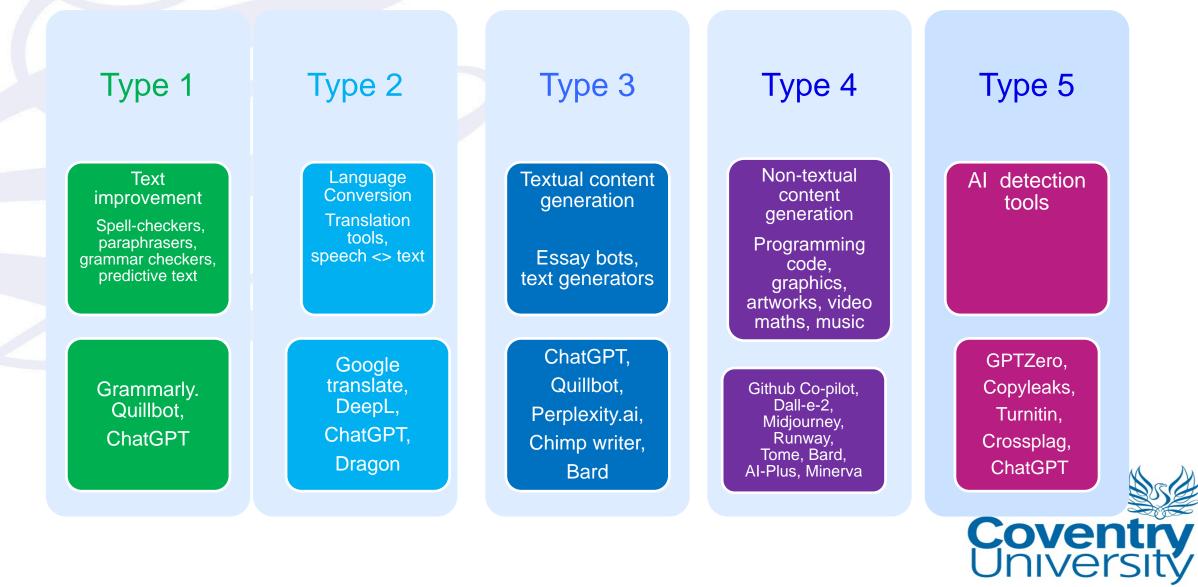
Academic Integrity Steering Group > Working group established March 2022 – broad membership

#### **Terms of reference**

- Understand more about AI tools, invite speakers, try tools
- Consultation with the wider University community Jan-June 2023, focus groups
- Generate guidance for staff and students draft July 2023, implement from Sept 2023
- Make necessary changes to regulations



#### Types of artificial intelligence tools



#### **Type 1: Text improvement tools**

Spellcheckers, paraphrasers, thesauri, grammar checkers Appropriate uses:

- Spellcheckers, predictive text always OK, no restrictions
- Grammar checkers, paraphrasers, thesauri
  - To aid people with special learning needs
  - To improve writing and grammar

#### **Inappropriate uses:**

- Grammar checkers, paraphrasers, thesauri
  - To hide plagiarism or reduce similarity using synonyms and wordspinning
     Coventry

#### **Type 2: Language conversion tools**

**Tools: eg** Google Translate, DeepL, Dragon software, speech to text. **Appropriate uses:** 

- Converting from one medium to another by students with disabilities
- Supporting academic writing and reading, learning languages
   Inappropriate uses:
- Write assignment in first language, translate to English, submit
- Copy paragraphs in another language, translate to English, submit
- 'Forward and Back' translation to reduce the similarity percentage



#### **Type 3: Textual content generation tools** Appropriate uses of these tools:

- Conduct research into essay bots and critically evaluate
- Get some ideas for a literature review or background research
- Generate material to provide a starting point for a piece of work, then develop, check accuracy, acknowledge use

#### **Inappropriate uses of these tools**

- Answering an exam question in real-time
- Adding paragraphs of generated text to an assignment then submitting it with minor or no changes
- Generating content for requirements of a whole assignment or dissertation, then submit with minor or no changes
- Asking "Alexa" for help with exam questions



#### **Type 4: Non-textual content generation tools**

**Tools** that generate programming code, music, graphics, artworks, etc, eg: <u>Midjourney</u>, <u>DALL-E-2</u>, <u>Github Co-Pilot</u>, <u>Tome</u>, <u>AI-Plus</u>, <u>Runway</u>, <u>Minerva</u>, <u>Bard</u>

**Appropriate use of these tools:** 

- To give students inspiration to get started
- If the tutor has asked or advised students to use one of these tools for an assignment
- Always acknowledge what tool was used and keep drafts **Inappropriate use of these tools:**
- Input the assignment task to the tool and submit the output unchanged or with minor changes as your own work



#### **Type 5: AI Detection tools**

- Tools: CopyLeaks, GPT Zero, Turnitin's AI detector, ChatGPT
- Al detection software: Copyright and data privacy concerns about use with student work no permission to upload the work
- Al tools themselves can be asked to check (not accurate)
- Outputs not reliable enough to use as evidence
- Turnitin's AI detector: currently being tested at Coventry University Group then we will decide how to deploy

Weber-Wulff, D., Anohina-Naumeca, A., Bjelobaba, S., Foltýnek, T., Guerrera-Dib, J., Popoola, O., Šigut, P., Waddington, L. (2023). Testing detection tools for AI-Generated Text. Preprint <u>https://arxiv.org/abs/2306.15666</u>



#### **GR** Appx 1 – DRAFT 2023-4 List 1: Definition of academic misconduct

1.6.1 Academic misconduct includes ethical misconduct and is defined as:a) any attempt to gain an unfair advantage in an assessment (including examinations/tests). This includes (but is not confined to):

Sept 2022 definition:

xii) using technological aids and artificial intelligence, including translation software, paraphrasing tools, text generation software (essay bots), and tools to generate graphics or artwork, without specific authorisation;

New wording:

xii) Unauthorised or unacknowledged use of technological aids and artificial intelligence, including translation software, paraphrasing tools, text generation software (essay bots), and tools to generate programming code, graphics or artwork;



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1.6.1 Academic misconduct includes ethical misconduct and is defined as:a) any attempt to gain an unfair advantage in an assessment (including examinations/tests). This includes (but is not confined to):

Sept 2022 definition:

xiii) where an assignment is required to be written in English, writing it in a language other than English and then using translation software or assistance from a third party to convert into English;

New wording:

xiii) where an assignment is required to be written in a specified language, writing all or most of it in another language and then using translation software or assistance from a third party to convert into the specified language;



# Why do we need to be cautious about outputs from AI tools?

- Accuracy
- Reliability
- Bias
- The need to understand and assess students' own learning and development
- Misuse: academic integrity breaches



#### Consultation: Questions for the focus groups designed September 2022

- In what contexts should the University permit students to use this type of tool?
- In what contexts should this type of tool (or some of its features) be banned from use by students?
- What can we do to disrupt or restrict inappropriate student use of these tools?
- How can teaching staff/the University detect that a student has used this type of tool (or some of its features) inappropriately?



# Brief summary of findings

- Banning is not possible, look for opportunities for ethical use
- Staff / student guidance training on ethical use of AI tools
- Urgent need for communication with staff, students to reassure
  - Staff & student guidelines types of tool, types of use: example scenarios
- Awareness among staff varies
- Differences in viewpoints on allowing use, eg "we can't control", "go back to closed book exams"
- "group think" responses from senior team, eg "embrace AI"
- Assessment design = requirements for contract cheating
- Possibilities for detection



# **Thematic analysis**

- Appropriate uses of AI tools
  - What good use of AI looks like
  - When to permit use
  - Examples of innovative and appropriate use of AI tools
- Misuse / abuse of AI tools
  - Examples of threats from AI tools
  - When and how to restrict use
  - Admissions and recruitment
- Guidance for staff
  - Teaching, learning, pedagogy,
  - Assessment methods, assessment design
  - Workplace use of AI tools, future careers
  - Group work
  - Staff training and research
- Working with schools and partner institutions

- Academic conduct process
  - Challenges and disincentives for staff to report cases
  - Detecting potential misuse
  - Use of AI detectors
  - Understanding reasons for cheating
  - Risks to minimise
  - Regulations, classifying seriousness of misuse, QA
- Deterring
  - Guidance for students
  - Educating students about AI tools
  - Educating students about academic integrity
  - Developing student skills
- Equality and Diversity
  - Supporting students with special learning needs
  - Inclusivity



## Detecting inappropriate uses of AI tools

- Many cases of AI misuse have been detected and some proven at Coventry University
- Checklist of characteristics, but not sure how long this will apply
- Al detection software: Copyright and data privacy concerns Al tools themselves can be asked to check used for deciding whether to pursue a case, but not reliable enough to use as evidence
- Turnitin's AI detector: currently has been tested at Coventry University Group – no plans to make it available to staff
- If suspicions arise: follow same procedures as for contract cheating – ie call for a viva to generate evidence



### Misuse of AI tools: checklist

- Lack of critical thinking, largely factual content
- Repetition of content
- Inaccuracies and completely made up "facts"
- References irrelevant / unavailable / old / fabricated / copied but some genuine
- Content generic, off the point but getting better
- Vocabulary, spelling (US/UK),
- Sentence length relatively uniform no variability, "burstiness"
- Knowing the student:
  - Grammar is just too perfect
  - Could this student have written this?
  - Writing, content too advanced
- Could it have been translated? check language of references for clues
- Fabrication of data, references, facts does it look genuine, repurposed, fake?
- Strange synonyms: a paraphrasing tool or word spinner could have been used
- Graphics, artwork: inaccurate portrayal of physical objects, anatomical features

Could also be signs of contract cheating, Essay mills and ghost writers also make use of these tools

# Staff guidance

General guidance for staff on <u>registry page</u> and <u>teaching knowledge base</u> also on <u>student pages</u>

Module leaders should make clear to students on the assessment brief:

- What types of AI tools students may use and for what purpose
- What types of AI tools students may not use and why this would be inappropriate
- What types and use of AI tools need to be acknowledged
- How to acknowledge the use of AI tools and demonstrate their own learning and input to the work: what content did they create

Standard wording is provided for this guidance that module leaventry customise, adapt to specific needs.

# Student guidance

General guidance for students is available via <u>registry page</u>, <u>student portal</u> and the <u>teaching</u> <u>knowledge base</u>

If a student wishes to use any tool with artificial intelligence capabilities to help them complete their assessment (taught or research), unless consent to use is made clear in the assignment brief, they must:

- Gain permission from the module leader or supervisor to use a specific tool
- Acknowledge the use of the tool in their work and make clear which contributions are from the AI and what parts of the work are their own.
- Keep drafts to show how their work was developed and what content is original to them

In the guidance students should be advised that failure to follow this advice may lead to allegations of academic misconduct.



### Guidance for Centre for Academic Writing (CAW) & CU Group Academic Writing Services (AWS)', which applies to CAW and AWS staff:

- CAW/AWS staff should not pass assignments through content/output detectors (including Open Al's 'Al Classifier for indicating Al-written text) to attempt to detect if a text has been produced by CHAT GPT or any other text generation tool.
- At no point is a student sending CAW/AWS their work with an explicit or implicit level of consent for that work to be passed through an automated AI-detection tool.
- Using data (i.e. a student's draft assignment) for a purpose it was not collected for is a GDPR issue and breaches University policy. It also breaches the privacy terms and usage conditions of many content/output detectors, including Open AI's 'AI Classifier', which states 'Be sure you have appropriate rights to the content before using the AI Text Classifier'.

CAW/AWS's tutoring role differs from that of academics teaching on modules and degree courses, because students bring their drafts to us for feedback in various states of completion—we are not marking their submitted assessments. However, for Faculty staff guidance, these or similar points marking apply.

### **Acknowledging contributions**

- Students should always acknowledge any help they received, for example from a proof-reader, family member or another student, using a simple factual statement
- There should not normally be the need for students to acknowledge <u>appropriate</u> uses of Types 1 and 2 (transformative rather than generative) AI tools, unless it results in substantial amounts of largely unchanged input from the AI being included in the student's submission. However, if in doubt, it is safer to add an acknowledgement
- Acknowledging contributions from AI tools should consist of an acknowledgement, a description of the contribution and a reference ...



### Acknowledge, Describe, Reference

#### Acknowledge whether and to what extent AI has been used in your work, e.g.

I am not aware that any content generated by AI technology has been presented as my part of own work.
I acknowledge the use of <insert AI tool(s)/link/date of access> to generate materials used for background research and self-study in the drafting of this assessment.
I acknowledge the use of <insert AI tool(s)/link/date of access> to generate materials that were included within my final submission. Describe how the information or material was generated (including the prompts used), what the output was and how the output was changed:

- •The following prompts were input into <AI system>: <List prompt(s)>
- •The output obtained was: <Paste the output generated by the AI system>
- •The output was changed by me in the following ways: <explain the actions taken>

#### Reference

 cite and reference the use of AI using the APA Guidelines: <u>https://apastyle.apa.org/blog/how-tocite-chatgpt</u>
 For non-text work the module leader

will advise how to reference



#### Acknowledge

Students should acknowledge whether and to what extent AI has been used in their work. Examples are:

- I am not aware of any content generated by AI technology that has been presented as my own work.
- I acknowledge the use of <insert AI tool(s)/link/date of access> to generate materials used for background research and self-study in the drafting of this assessment.
- I acknowledge the use of <insert AI tool(s)/link/date of access> to generate materials that were included within
  my final submission.

#### **Describe**

Alongside acknowledgements, students should describe how the information or material was generated (including the prompts used), what the output was and how the output was changed by the student. Examples are:

- The following prompts were input into <AI system>: <List prompt(s)>
- The output obtained was: <Paste the output generated by the AI system>
- The output was changed by me in the following ways: <explain the actions taken>

#### **Reference**

Students should cite and reference the use of AI using the APA Guidelines: <u>https://apastyle.apa.org/blog/how-to-</u> <u>cite-chatgpt</u>.



#### Example: how to cite and reference

#### Example citation:

When prompted with "Is the left brain right brain divide real or a metaphor?" the ChatGPT-generated text indicated that although the two brain hemispheres are somewhat specialized, "the notation that people can be characterized as 'left-brained' or 'right-brained' is considered to be an oversimplification and a popular myth" (OpenAI, 2023).

Example reference: OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model]. <u>https://chat.openai.com/chat</u>



#### Module and assessment design

- Ensure that the Intended Learning Outcomes for each module are designed to assess the student's understanding, achievement, learning, creativity, process – not just knowledge
- Design the module assessments to enhance learning and engagement, provide opportunities for students to demonstrate the understanding, apply their skills and knowledge, and excel
- Base all assessment criteria on Intended Learning Outcomes
- Share all this information with students as part of the briefing about the assessment requirements
- Assessment design to counter academic misconduct



# Guidance on module and assessment design

#### University of Sydney Guidance (8th June 2023).

Generative AI guidelines for Educators 8<sup>th</sup> September 2023. <u>https://www.qqi.ie/news/new-framework-for-investigating-academic-misconduct-published</u>

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JISC (2023). AI in Tertiary education <u>https://beta.jisc.ac.uk/reports/artificial-intelligence-in-</u> <u>tertiary-education</u> report to download first published 26/04/21 updated 06/09/2023

JISC (2023) Generative AI – a primer <u>https://beta.jisc.ac.uk/reports/generative-ai-a-primer</u> First published 12<sup>th</sup> July 2023, updated 29<sup>th</sup> July 2023.

QAA (2023). Maintaining quality and standards in the ChatGPT era.

https://www.qaa.ac.uk/docs/qaa/members/maintaining-quality-and-standards-in-the-chatgptera.pdf released 8th May 2023



# UK Russell Group's Guiding Principles on Generative - Al July 2023

The five guiding principles state that

- universities will support both students and staff to become AI literate;
- staff should be equipped to help students to use generative AI tools appropriately;
- the sector will adapt teaching and assessment to incorporate the "ethical" use of AI and ensure equal access to it;
- universities will ensure academic integrity is upheld;
- and share best practice as the technology evolves.

See: https://www.theguardian.com/technology/2023/jul/04/uk-universities-draw-up-guiding principles-on-generative-ai

### Discussion

- Al tools are here to stay and will continue to improve, rapidly
- We need to seize opportunities to use AI tools ethically
- Our students need to develop skills and knowledge about this
- Staff need to develop expertise and knowledge
- Billions have been / are being poured into their development
- Charges / fees will come how should institutions respond?
- Should we provide access to certain tools for staff and students?
- If so, which tools?



## **Resources for Coventry University Group**

- Teaching Knowledge Base page: <u>https://teach.coventry.domains/articles/academic-and-research-integrity/</u>
- Staff portal Registry page: <u>https://share.coventry.ac.uk/staff/ps/Registry/Pages/Academic-and-Research-Integrity.aspx</u>
- Student portal Registry page: <u>https://share.coventry.ac.uk/students/Registry/Pages/Academic-and-Research-Integrity.aspx</u>



#### **PLEASE SHARE YOUR THOUGHTS AND QUESTIONS**

Thanks for listening – Ireneg@coventry.ac.uk



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