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ENAI Recommendations on the ethical use of Artificial Intelligence in Education

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Rationale

Artificial Intelligence (AI) tools are constantly being released into the public domain. As with all new technological innovations, this brings a range of opportunities and challenges for education: primarily for educators and learners. There is an increasing interest in the academic community and beyond to use Artificial Intelligence in Education (AIED) to generate content. This presents opportunities and challenges for academic and research integrity.

The European Network for Academic Integrity (ENAI) is an international association gathering educational institutions and individuals interested in maintaining and promoting academic integrity. As the use of AI tools may not always be consistent with academic integrity, we consider it important to familiarise all education stakeholders with how to use AI tools responsibly and in accordance with academic integrity practices and values.

ENAI presents a set of recommendations with the aim of supporting academics, researchers and other educational stakeholders, including students' organisations, on the ethical use of AI tools. The recommendations focus on the importance of equipping stakeholders with the skills and knowledge to use AI tools ethically and the need to develop and implement relevant educational policies addressing the opportunities and challenges posed by AIED.

Process

To create these recommendations, we used our experience and knowledge, both about AI, and academic integrity. The authors collectively drafted the main structure and main ideas of the recommendation. The draft was circulated to the ENAI working group members, most of whom provided valuable comments and suggestions. Then the authors incorporated the comments and prepared the final wording of the document.

The field of artificial intelligence is advancing fast, and the ways that it disrupts education are changing from one week to the next. We consider these recommendations as a working document, and we invite everyone to provide feedback. There will be a special session at the European Conference on Ethics and Integrity in Academia 2023 in Derby, UK, dedicated to this document.

Background and context

Academic integrity (AI) can be defined as "compliance with ethical and professional principles, standards, practices, and a consistent system of values that serves as guidance for making decisions and taking actions in education, research and scholarship" (Tauginienė et al. 2018, p. 8).

Artificial Intelligence refers to systems that appear to have "intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals" (European Commission, 2018, p. 4).

AI-based tools can be used to transform, produce or generate any kind of content, such as text, images, art, music, or programming code. Different technologies, including machine learning and neural networks, are used to develop the capabilities of these tools.

Authorised and declared usage of AI tools is usually acceptable. However, in an educational context, undeclared and/or unauthorised usage of AI tools to produce work for academic credit or progression (e.g. students' assignments, theses or dissertations) may be considered a form of academic misconduct ("any action or attempted action that undermines academic integrity and may result in an unfair academic advantage or disadvantage for any member of the academic community or wider society" (Tauginienė et al. 2018, p. 9). Moreover, it is increasingly challenging to reliably distinguish AI-generated content from human-produced content.

The wide accessibility of AI may exacerbate existing types of academic integrity threats, such as essay and paper mills, fabrication and falsification of data, etc.

Current definitions of misconduct, such as contract cheating and plagiarism, may not explicitly include this type of misconduct. Therefore, we propose an umbrella definition for all types of unauthorised content generation, including contract cheating and inappropriate use of AI:

Unauthorised content generation (UCG) is the production of academic work, in whole or part, for academic credit, progression or award, whether or not a payment or other favour is involved, using unapproved or undeclared human or technological assistance.

AIED can be used for unauthorised content generation; however, the use of AIED is not automatically unethical. There can be differences between academic disciplines, education institutions, courses, types of assessment, cultures, regions, and countries as to what is considered acceptable use of AI and what is not.

While AI can threaten academic integrity, it also presents opportunities. AI multiplies users' abilities - in both good and bad ways. Therefore, students and educators should be guided on the benefits and limitations of AI tools in order to learn and use AI ethically and uphold academic integrity. Moreover, with the increasing automatisation of modern societies, they will likely use AI tools in their professional life. Therefore, they should be given opportunities to learn these skills during their education.

Recommendations on the ethical use of AIED

All persons, sources, and tools that influence the ideas or generate the content should be properly acknowledged. Consequently, when an AI tool is used, it should be acknowledged. The acknowledgement may be done in different ways, according to the context,

the institutional policies or other requirements. When possible, the input given to the AI tool should be specified.

Appropriate use of services, sources, and tools that only influence the form is generally acceptable (e.g. proofreaders, proofreading tools, spelling checkers, thesaurus).

An AI tool cannot be listed as a co-author in a publication as it cannot take responsibility for the content and findings reported. The person (human being or legal entity) is always accountable for the content, whether or not it was generated by AI (see COPE Guidelines for Authorship and AI by Levene 2023).

The outputs of AI tools can include biased, inaccurate, or incorrect content that users should be aware of. This may be caused by bias in training data, algorithms, filters, etc.

It is important to include information about AI in education for all students and in training for teachers. If students do not have the opportunity to learn about the ethical use of AI, they will be more susceptible to engaging in inappropriate use of AI, which may constitute academic misconduct.

Students should be included and educated on the following:

- The purpose of all activities related to learning and assessment and why they should develop (e.g. write) their individual/group work assignments.
- How to develop their ethical writing and content production skills.

Teachers should receive training on ethical use of AI including development of relevant learning outcomes, learning activities, and assessment strategies.

National guidance and institutional-level policies should be developed and/or reframed to include AI. National guidance should provide overarching advice on what institutions should include in their policies.

Institutional policies should:

- Define default rules on when and how the students, teachers, researchers and other educational stakeholders are allowed to use different kinds of AI tools. There should be space for specific rules at course level. The policy and the rules should be clearly communicated to all stakeholders.
- Guide the users on how to correctly and transparently acknowledge the use of AI tools in an assignment, dissertation, thesis, paper, article, book chapter, computer programme, graphic, artwork and other types of artefact.

Summary statement

There is no doubt that AI brings significant change to education. As with any other technology, it extends and enhances human abilities and may be used both in a positive and a negative way. ENAI urges national policymakers, institutions, and all individual members of the academic community to seek ways on the ethical use of AI and share best practices in order to benefit from the opportunities that AI brings to education and science.

Declarations

Competing interests

The authors declare that they have no competing interests.

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