Typical weaknesses in AI generated texts

Detection tools and large language models are undergoing such rapid and mutually rein-forcing development processes that the use of generative AI in take-home assignments cannot usually be proven. More important than the question of whether generative AI has been used – even when prohibited – in written assignments is often the question of whether the resulting texts meet academic standards.

Generative AI tools are a great temptation, especially for inexperienced or struggling stu-dents, because they seem to produce better texts than the students are capable of pro-ducing on their own. For didactic reasons, too, it is therefore important to clearly identify the weaknesses of AI generated texts and to measure them against scientific quality cri-teria.

If students understand that AI generated texts are not as good as they look, they are more likely to reflect on the strengths and weaknesses of the tools. This also helps them to better understand what they themselves can and are expected to achieve.

The following catalogue of criteria can be helpful in assessing texts and talking to stu-dents. Please feel free to contact the Writing Centre for further assistance and infor-mation: schreibzentrum@uni-konstanz.de.

Content weaknesses:

- The research question is not relevant to the specific discipline or course; the questions raised in the texts are merely generalistic.
- Although subject-specific theories and / or methods are named, these are not applied to derive and answer the research question.
- Research question and content are not related to each other.
- Introduction and conclusion are not related to each other.
- Lack of structure in argumentation: The same idea appears in several places in the text; the text meanders from idea to idea. There is no weighting of arguments, they are merely listed side by side (often numbered: "firstly, secondly…").

Academic standards:

- The text seems to refer to research several times, but does not cite sources for it.
- Source and related content do not match.
- The number of sources used is very low.
- The sources used come from a variety of disicplines. What they have in common is that they have been published as Open Access, and many can also be found via Wikipedia. Such texts fulfil the criteria to be included as training data in AI research

tools. While it is not reprehensible to conduct AI supported research, this alone does not fulfil the requirements of a subject-specific term paper. [1]

- Many sources have no scientific claim.
- Literature discussed in the context of a course is missing.

Linguistic:

- The use of adjectives is unusual for a scientific text in terms of nature and scope.
- The text alternates between present and past tense.
- Conspicuous duplications in sentence structure, which occasionally occur as output errors in ChatGPT.
- A paragraph seems to conclude a text, but then a new thought is introduced.
- Exaggerations and subjective statements.

If a text shows many of these characteristics, we recommend that you seek a discussion with the student and clearly state the shortcomnings of the text and the similarities to AI generated ones. When assessing the texts, it is then no longer a question of whether they were created with the help of AI but whether they are sufficient for receiving academic credit points.

We also recommend to discuss the weaknesses of AI generated texts with your students during the semester. You must assume that these tools are incresingly integrated into word processing programs as a matter of course. Simply prohibiting their use is less effective than a reasoned explanation.

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[1] While hallucinations in the sources can still occur, this has become more rare with the integration of basic internet search functions into AI tools. Instead, the freely available sources described above (often in an English translation) are now appearing.