Recommendations for the use of generative AI in doctoral studies, especially dissertations, at the University of Oldenburg

Doctoral candidates are researchers at an early stage of their career who, as such, are committed to the values of science. Thus, responsible action in the generation and writing of scientific knowledge, also with regard to the use of technological possibilities, is a matter of course and a prerequisite for scientific integrity and thus any scientific career.

While modern technologies are not without risks, they offer great potential for scientific work. This is why we encourage researchers to make responsible use of generative AI. This document is intended to provide doctoral candidates with recommendations for the use of generative AI tools such as ChatGPT, especially with regard to dissertations. The list is not conclusive.

The University of Oldenburg does not consider a ban on the use of generative AI to be expedient or appropriate and therefore joins the ranks of organisations that want to allow responsible and restricted use of these technologies.

Based on current knowledge, the following key points appear to be worth emphasising in the area of doctoral studies:

- The use of generative AI for doctoral theses / dissertations is only permitted to the extent that the researcher's own scientific (examination) performance remains unmistakable, i.e. depending on the discipline, the use of AI could be restricted to the introduction, to the literature overview or the concluding summary, or it could be banned for the description, discussion or analysis of research results or objects. The doctoral candidates themselves are generally responsible for making sure that the use of AI is permitted in the areas related to their own dissertation, e.g. by reviewing the relevant doctoral or school (*Fakultät*) regulations or by consulting with the school and/or their supervisor.
- AI must be used transparently. Researchers should indicate the extent of their AI use by specifying which generative AI model they used for which purpose (e.g. finding ideas, summarising literature, creating text sections, or data analysis/visualisation). The regulations of the respective school or doctoral committee determine the details of the labelling requirements.
- For reasons of confidentiality and data protection, the use of generative AI is not permitted in the preparation of assessment reports / expert opinions.
- Particular care must be taken with regard to data protection with respect to text and data entered (research or personal data), as this may be stored and used by the models.
- The intellectual property of others must be preserved; models may be prone to plagiarism. Responsibility for texts and their content remains exclusively with the authors, who are solely responsible for upholding good scientific practice.
- A user must be able to verify content created using generative AI in such a way that they can take full responsibility for the content created.
- Not using generative AI must not be a disadvantage for doctoral candidates.
- Due to the technical limitations (e.g. false statements, plagiarism, adoption of *biases*, flattering "behaviour" of the AI towards the user) and possible legal implications, a critical approach to or critical questioning of the performance of generative AI is indispensable!

- The immense energy and resource intensity of AI technologies must also be considered when using generative AI.

The recommendations mentioned here must be seen in connection with the "Regulations on the principles for safeguarding good scientific practice at the University of Oldenburg" and the "Recommendations for dealing with generative artificial intelligence in studies and teaching at the University of Oldenburg" (version dated 22 December 2023).