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# Generative AI in School and University Education

## On Policy Development at the University of Tübingen

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reporting on the work of the university committee “AG Generative AI”

LEAD Research Meeting  
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## Timeline of what happened so far

- 31. January 2023: first email by rectorate legally evaluating the situation as disallowing the use of ChatGPT by students and by researchers
- Formation of working group “AG Generative AI” with 29 members from the different faculties, students, central facilities, and administration
  - includes LEAD members Andreas Lachner, Detmar Meurers
  - full membership available at <https://uni-tuebingen.de/en/255287>
- 10. October 2023: First “Guidelines for using generative AI tools” announced
  - online at <https://uni-tuebingen.de/en/255287>
  - critically optimistic perspective on multifaceted potential of generative AI
  - idea: formulate general goals and guidelines adapted to subjects and institutions of the university
- 15. December 2023: Draft paper “AI in teaching and assessment” (currently only in German: “Künstliche Intelligenz in Lehr- und Prüfungskontexten”) circulated for discussion



## Overall perspective

- The transformative potential of generative AI touches all parts of the university:
    - teaching and learning of students
    - research and science communication
    - administration
  - Opportunities and challenges are complex
    - no one-size-fits-all, but dependent on context of use
    - challenges include understanding of capabilities, legal and ethical issues
    - difficult for individuals to navigate the complexity and bear all responsibility
- ⇒ strike for balance between individual responsibility and general guidance and guardrails



## Seizing the transformative potential of AI at the university involves

- preparing students to develop **future skills** and **AI literacy**
  - how to effectively and critically make use of AI in a changing world
- exploring and realizing the **didactic potential** of AI-based methods
- **facilitate research** and science communication
  - accessing and mastering wealth of information
  - assisting in writing, revision, translation, coding
- supporting **administrative processes**



## Developing a critically optimistic perspective

- **academic integrity and good scientific practice**
  - requires informed, reflected and transparent use of AI tools to avoid scientific misconduct (cf. DFG executive statement of Sept. 2023)
  - use of AI-generated text requires awareness of **bias** inherited from the training material
- **copyright and authorship:**
  - only natural persons can be authors under German law: AI-tools are never authors or copyright holders
  - adoption of AI-generated texts may result in copyright infringement where training data is copyrighted
  - prompting making use of copyrighted materials may infringe copyright
- **data protection and privacy:**
  - How data entered is processed is not transparent and may make personal information available or enable derivation of individual profiles sacrificing privacy.



## Developing a critically optimistic perspective (cont.)

- **equality of opportunities**: differences in access to AI-tools can lead to inequality, e.g., where more powerful models are only accessible to some users
- **deskilling**: using AI to carry out tasks such as writing and revision can result in losing the competence to carry out the task oneself, or never acquiring the competence or skill
  - Which competencies should still be taught/learned?
  - Can results be critically evaluated and interpreted if one has not developed the competency oneself?



## Generative AI, academic achievement and examinations

- The general exam regulations include the possibility to allow use of aids.
    - **Depending on the competencies** to be fostered, use of AI methods can be intended and productive.
    - Where aids are used that have not been explicitly permitted, this amounts to **deception**.
    - It must be possible to identify the **independent, individual contribution** of the examined student.
  - The **validity** of the examinations for the competencies and qualification objectives of a degree program needs to be ensured.
    - Depending on the subject and the competencies that are targeted by an examination, the use of AI methods can be meaningful and permitted.
    - The use of any aids must be made transparent. The statements of independence (“Eigenständigkeitserklärung”) can and should make explicit where AI-methods were used.
- ⇒ Tailoring the current draft guidelines and guardrails to the specific needs of the faculties and subject domains is the crucial current step → participate!