

Recommendations for the use of Generative Artificial Intelligence (GenAI) in teaching and learning at the University of Oldenburg

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Introduction

Recommendations for a general approach to navigating potentials and limitations of GenAI

- 1) Acknowledge and value the wide range of GenAI's possible applications and potentials.
- 2) Stay informed about problems, limitations, and risks.

Recommendations for the practical use of GenAI in the context of teaching and learning

- 3) Define and communicate from the outset strategies for using GenAI in teaching.
- 4) Become familiar with suitable teaching and learning approaches through individual consultations and workshops.
- 5) Document and disclose the use of GenAI fully and transparently.

Recommendations on competencies needed for working with GenAI

- 6) Nurture students' competencies for reflecting on the use of GenAI.
- 7) Foster students' competencies that pertain to academic skills.

Recommendations about legal challenges and using GenAI in assessment and examination

- 8) Be aware of principles and issues in the areas of data privacy, academic integrity, and ethics.
- 9) Review and adapt assessment formats and assignments.
- 10) Sanction violations of good academic practice.
- 11) Be meticulous with sources and declarations of independent work.

Introduction

The use of generative artificial intelligence (referred to below as GenAI) has been the subject of intense debates in the education sector at least since the end of 2022 due to the rapid development of various tools that can create new content using artificial intelligence (e.g. ChatGPT, BingChat, chatbots). AI features will likely soon be integrated into popular standard software in even more powerful ways and the use of GenAI for work and routine tasks will become widespread. The increasing availability and accessibility of GenAI pose far-reaching challenges in the university landscape that necessitate urgent discussions about the future organisation of academic studies and teaching as well as reflection on how these challenges will lastingly influence and change higher education. In view of the substantial opportunities and potentials for development presented by GenAI, its use in teaching and learning should by no means be ruled out, but an appropriate framework must be put in place to ensure that [good academic practice](#) is upheld.

In this light, engaging with GenAI and developing recommendations for shaping teaching and learning in the age of GenAI has become an important task. To derive recommendations, possible applications of GenAI and their potential need to be explored; the problems, limitations, and risks associated with the use of GenAI need to be subjected to critical reflection. Recommendations on the use of GenAI also need to be formulated in reference to possible strategies of action, pedagogical use, and for documenting and disclosing the use of GenAI. Competencies need to be clarified for every discipline, module, and course: what competencies do students and teaching staff need for using GenAI? What competencies should be acquired despite the existence of GenAI? What tasks can be delegated to GenAI? Relevant recommendations on legal challenges and on the use of GenAI in assessment also need to be developed.

The Recommendations for dealing with GenAI in teaching and learning at the University of Oldenburg are intended to supply guidance for students and teaching staff at the university and to create a basis for discussion. This document is not intended to provide legal advice on GenAI. The recommendations reflect the current status of GenAI development and should not be regarded as final and complete; both the technology and appraisals of its use continue to evolve dynamically and at an extraordinary pace. It follows that the recommendations must be understood as a product of their time (December 2023); adapting them to reflect new developments in GenAI and continuing to develop them will remain an ongoing task. Feedback and suggestions are expressly welcome so that the resulting discussions can serve as a basis for developing additional action-oriented recommendations and offerings.

At this stage, four overarching areas can be identified, which the recommendations for using GenAI in teaching and learning seek to address:

- Recommendations for a general approach to navigating potentials and limitations of GenAI
- Recommendations for the practical use of GenAI in the context of teaching and learning
- Recommendations on competencies needed for working with GenAI
- Recommendations on legal challenges and using GenAI in assessment

Recommendations for a general approach to navigating potentials and limitations of GenAI

1) Acknowledge and value the wide range of GenAI's possible applications and potentials.

In order to facilitate the use of GenAI in teaching and learning in ways that are appropriate and adequate for the current time, students and teaching staff should become aware of and be able to evaluate the many possible applications of GenAI and their potential. Providing relevant information and appropriate communication can enable transparency.

GenAI can, for instance, potentially assist students with:

- gaining an overview of a topic,
- developing ideas and structuring outline drafts,
- summarising, rephrasing, and translating their own texts,
- finding answers to their own questions that have emerged from readings or courses,
- receiving personalised suggestions to improve their learning progress.

The possible applications of GenAI for teaching staff include:

- tasks involved in teaching and syllabus design (literature research and evaluation, creating outlines, objectives, content, methods, definition of assignments, case studies),
- methodically creating and defining assignments and work materials for students of different levels (internal differentiation),
- developing applications (e.g. chatbots, learning bots),
- creating examination questions,
- optimising assignments, instructions, and reminders.

2) Stay informed about problems, limitations, and risks.

Students and teaching staff should be informed of the numerous problems, limitations and risks associated with using GenAI in order to facilitate the critical, constructive, reflective, and sensitive use in and beyond university teaching and learning. These challenges can, for instance, be related to:

- sources, limitations, and how GenAI works,
- potential for errors when using GenAI,
- data privacy and copyright regulations,
- existing ethical and scholarly principles for writing academic texts,
- rules for use and proper citing when writing with the help of GenAI.

Students and teaching staff should be mindful that when using GenAI:

- performance largely depends on the training data and its sources, but these are not obvious in particular cases (critical review of sources),
- the answers are influenced by training data and sources that can be selective and contain build-in prejudice (bias),
- the answers, content, summaries, and references given are sometimes fictive and unreliable and must be verified through literature research (verifying accuracy, relevance, and appropriateness).

Recommendations for the practical use of GenAI in the context of teaching and learning

3) Define and communicate from the outset strategies for using GenAI in teaching.

Due to data protection issues, using GenAI in teaching and learning cannot currently be made mandatory. This can only change once these legal issues have been clarified and suitable software has been approved and become available. Generally speaking, there are three different scenarios for the use of GenAI in courses and examinations: (1) unrestricted use, (2) restricted use (e.g. during a course, but not its assessment) or (3) banned use. The use of GenAI in teaching should be defined and communicated at the beginning of each course. In addition, teaching staff should consistently make transparent their own use of GenAI in their teaching, in order to set an example and ensure transparency.

4) Become familiar with suitable teaching and learning approaches through individual consultation and workshops.

Teaching staff should make use of individual consultations and workshops – such as various professional development sessions by the University of Oldenburg – to engage with the role GenAI can play in designing teaching and learning activities. Such consultations and workshop sessions address how GenAI can be used responsibly and in beneficial ways for work as well as learning. Teaching staff can thus become learning guides for students and support them as they tackle tasks such as:

- experimenting with the use of GenAI,
- comparing different text types and writing styles,
- developing criteria for good prompts and questions,
- comparing introductions, specialised knowledge, and summaries provided by GenAI with information from reference books,
- critically interrogating answers given by GenAI to questions on topics covered in courses and analysing them to identify sources of error,
- comparing students' own summaries with GenAI-generated summaries and identifying strengths and weaknesses of both.

5) Document and disclose the use of GenAI fully and transparently.

The use of GenAI must be fully and transparently documented and disclosed by students as well as teaching staff in accordance with the principles of good academic practice. To achieve this, text passages that have been directly or indirectly created by using GenAI must be documented in a suitable form. Requirements should be specified in detail by individual schools, departments, and members of teaching staff. One possible approach is to supply references for text passages based on ideas or inspiration supplied by GenAI in the same way as one would reference paraphrased quotations. Text passages that have been (almost) completely written by GenAI could be cited as one would cite direct quotations. The independent academic effort of the writer must be clearly discernible.

Recommendations on competencies needed for working with GenAI

6) Nurture students' competencies for reflecting on the use of GenAI.

Students must – without any doubt – possess fundamental competencies for reflecting on the use of GenAI as well as have advanced skills in academic thinking, research, and writing. The use of GenAI should not lead to delegating independent thinking and working on assignments to GenAI in such a way that students fail to acquire relevant competencies. Students should be challenged to develop skills that will enable them to actively and responsibly use GenAI in a critical, constructive, and confident manner (including, for instance, evaluating results generated by GenAI and making informed decisions about using it). To achieve this, students' needs and requirements should be determined in teaching units, courses, and degree programmes in order to develop appropriate services and forums for exchanging ideas about how to best utilize GenAI.

7) Foster students' competencies that pertain to academic skills.

Students' competencies that pertain to academic skills should be fostered in order to facilitate the use of GenAI together with contextualization and appraisal of the generated results. Students should have opportunities to acquire comprehensive general skills in academic writing and research (e.g. identifying topics of interest, research questions, literature research, reading skills, working with sources, collecting and evaluating data, making an argument, adopting a position, writing) and specific skills related to using GenAI (e.g. understanding how it works, its potentials and limitations, reflection, evaluation, correct integration of GenAI output into students' text production, adherence to rules for proper citation and independent study) in appropriate modules and extracurricular or elective courses.

Recommendations about legal challenges and using GenAI in assessment and examination

8) Be aware of principles and issues in the areas of data privacy, academic integrity, and ethics.

Some legal issues relating to the use of GenAI in teaching and learning have yet to be definitively clarified ([further information](#)). Students and teaching staff should therefore be especially aware of principles in the areas of data privacy, academic integrity, and ethics when using GenAI. Students and teaching staff must be aware that they

- cannot and must not be obliged to use GenAI,
- should consider and be able to critically evaluate the fact that personal data, questions, and information may be collected, stored, and used when they register with GenAI providers and use GenAI,
- should take care not to transmit personal, sensitive, or confidential information or information protected by copyright to GenAI until the legal framework has been clarified.

Students who opt out of using GenAI during a course must not experience any disadvantages as a result. Teaching staff should indicate in module descriptions whether GenAI will be used.

9) Review and adapt assessment formats and assignments.

Given the wide range of GenAI's capabilities, teaching staff should critically analyse and adapt assessment formats and assignments for modules and courses. It is not recommended to entirely abandon written assignments as such, but text passages written by students independently and those produced with GenAI assistance may not be readily distinguishable. For reasons related to data privacy, copyright, and examination regulations, GenAI may not be used to check or evaluate students' performance in assessments. In that light, the following is recommended:

- adapting evaluation criteria (critical review of sources, reflection, contextualisation within the specialist discourse),
- adapting assignments (comparison of GenAI summaries with one's own, assignments involving reflection, additional oral assessments),
- stronger focus on formative learning (e.g. offering advising sessions to students during the writing process, integrating peer-to-peer feedback into course design),
- greater emphasis on competence development in assessment (e.g. individualised assignments) and fraud prevention (e.g. oral examinations, in-class examinations),
- increasingly shifting toward assessment formats that do not involve essay writing or other (unsupervised) written work, for example oral and practical examinations. Written assignments in which GenAI can only provide help to a limited degree can also be considered, for instance, reflective learning diaries, assignments based on authentic objects or situations, the production of charts, diagrams, images, sound files, or videos.

For reasons related to data privacy and examination regulations, GenAI may not be used to check or evaluate students' performance until legally compliant software is available.

10) Sanction violations of the principles of good academic practice.

When GenAI is used in assignments in which its use is banned, or used in ways that violate restrictions on its permitted use, or used without sufficient transparency and documentation in assignments where its unrestricted use is permissible, a violation of the principles of good academic practice and intent to deceive must be assumed. Such violations should be sanctioned in accordance with the relevant examination regulations. They provide for a procedure in which reports of suspected violations are examined and suitable actions are taken against the person responsible. When a panel for good academic practice determines that a violation has taken place, the Presidential Board determines the actions to be taken (issuing a ban from the university, cancelling examination results).

11) Be meticulous with sources and declarations of independent work.

All students submitting written work (including final theses) for assessment must confirm in writing that they have written or produced the work independently, that they have not used any sources or aids other than those specified, and that they have adhered to the general principles of academic research and publications set out in the [Regulations governing the principles for safeguarding good academic practice](#). This means that all text passages that have been created directly or indirectly with the help of GenAI must be fully, transparently,

and unambiguously identified. It also means that submitted work which draws largely or exclusively on GenAI output or work copied from GenAI cannot be regarded as independent work as specified in declarations of independent work. Readers must be able to identify, at every juncture, all intellectual property drawn from other works or created by third parties or by using GenAI. A statutory declaration stating that work has been completed independently, without unauthorised external assistance, and without the unidentified use of GenAI must be submitted with all qualification theses.