The Navigation Model

At the University of Copenhagen, we do our work with **responsibility** and **respect for society, cultural heritage, the environment, and people around us.**
Integrity, honesty and **transparency** are prerequisites for academic work. We therefore expect exam performances to reflect **a student's own learning and independent efforts**.
Academic work is always based on other people's insights, knowledge, and contributions, but always with thorough **recognition, respect,** and **crediting** of their work. This also applies when using generative artificial intelligence.

The Navigation Model is a reflection tool to decide the direction of using generative AI to attain academic goals.

The University of Copenhagen emphasises that good academic practice and independence should continue to characterise university education in an age when generative AI is a reality.

Read more about reliability, honesty, respect, responsibility and independence in Good academic practice and independent work with generative artificial intelligence at the University of Copenhagen

Generative artificial intelligence can be integrated in university programmes in (at least) two different ways:

- As an actual object of study or
- As an aid in study activities such as papers, assignments, analyses, and reports.

The navigation model is intended for use with generative AI as an aid during programmes in the broad sense, i.e. both in teaching and at exams - to create coherence in the courses that students go through.

The purpose of the model is to help academic environments, lecturers, and students to better understand how generative AI can and should be used as an aid to attain the learning objectives laid down for courses and the full programme. The key thing is that students acquire the skills and competences intended with the programme. At the same time, generative AI can be useful in many different work steps and phases. The output of AI tools triggers discussions about what constitutes academic quality, internationally known as evaluative judgement.

The model can be used to discuss in which cases students can benefit from using generative AI. This involves choices on the individual course and/or across all courses of the programme about when and how generative AI can be used. At a later stage, these choices can be part of deliberations about exam regulations, for example whether or how generative AI can be permitted as an aid. It must be clear for students what the rules are, and that the outset is academic and content specific.

The model has three directions:

#1) No use of generative AI allowed
#2) defined use of generative AI allowed
#3) all use of generative AI allowed.

In #2, the idea is that the attainment of certain academic goals can be advanced when students practise in particular ways without using generative AI aids. The curriculum or course description indicates the activities that are permitted in the programme or course to acquire the intended academic expertise. Since the use of generative AI varies by discipline and is rapidly evolving, the list under #2 of the model is not definitive. We encourage the academic environments to add other ways of using generative AI that are missing from the list in #2 of the model - or adjust the list to make it more manageable.

Direction #1: No use of generative AI is allowed in study and exam activities.

Direction #2*: Defined use of generative AI is allowed in study and exam activities.

Transparency about how generative AI is used is a requirement. Defined use can be, for example:

1. Initial idea generation
2. Explanation of concepts, definitions and models for better understanding
3. Structure and outline
4. Source and literature search
5. Summarising large amounts of information
6. Data processing (e.g. transcription, cleaning and structuring data prior to analysis)
7. Analyse and interpret data, literature, theory, etc.
8. Paraphrasing sources
9. Translation
10. Proofreading
11. Rephrase text stylistically (e.g. make the language more academic)
12. Image generation, graphic visualisation, maps, tables, audio, video, etc.
13. Programming - explaining code, generating code, debugging and troubleshooting
14. Critical review and feedback
15. Planning or structuring workflow
16. ? (To be filled in by academic environment)
17. ? (To be filled in by academic environment)
18. ? (To be filled in by academic environment)

Direction #3 All use of AI is allowed in study and exam activities, but judgement on its use is essential.

Transparency about how generative AI is used is a requirement. It is up to the student to argue why the tools have been used sensibly in the specific context.

**It is important to remember that students are expected to disclose the use of generative AI, for example in the methodology section of the paper, by referencing in some cases or by filling out a template.*

Decisions on AI Tools as Exam Aids

The purpose of exams is to assess students' attainment of the learning objectives. According to the University's principles for exams and generative AI, the organisation must provide the framework and arguments for how exams can test this. The best way is to start the decision-making process with the assessment interest and the contextual factors, not the actual exam form: (see Good academic practice and independent work with generative artificial intelligence at the University of Copenhagen)

a) Assessment interest: What is the most important assessment interest of this course? With the academic environments answering this question not only for a single course, but the full programme, it will be clearer how it can be argued that students have been tested as intended.

b) Authenticity: How do students as future academics need to master certain tools in later contexts so they can act autonomously, responsibly, reliably, honestly and respectfully?

c) Aids: How will the presence of specific aids, including generative AI, support or challenge the assessment interest and students' judgement? If a certain use of generative AI will be problematic, the task is to figure out how the exam framework can be designed to avoid or at least reduce this problem.

d) The form, timing and exam materials can be based on insight into what existing generative AI tools are suited for in their current technical forms in relation to the academic goals.

Assessment of independent work in directions #2 and #3

The academic goals are based on the qualifications framework and taxonomic thinking and seek to clarify the intentions for student learning outcomes. When assessors examine and grade students' attainment of the academic goals at a particular taxonomic level, they must get an impression of how students reflect on their use of generative AI.

Good academic practice and independent work with generative AI at the University of Copenhagen proposes four criteria for assessing student independent work when using generative AI. Students demonstrate that they work independently by:

- their use - or non-use - of generative AI tools during the acquisition of the academic content and intended competences.

- arguing for their use of generative AI tools in their approach to specific academic assignments.
- being able to assess the processes and exercise professional judgement about the products generated by or with generative AI.
- reflecting on how generative AI can affect the field now and in the future and contribute to developing and co-creating it.

The first three criteria can be used to assess students' independent work in attaining the academic goals at all taxonomic levels. Choices of whether to use or not use generative AI, arguments for using it and judgement of the quality of processes and outputs of generative AI are relevant at all taxonomic levels and fundamental under the principles of good academic practice.
The fourth criterion in particular should not be seen as an expectation in all contexts, but is included in order to recognise that students, as part of their education, can develop original ideas for how their subject area and discipline could be developed or challenged by generative AI technologies. This can be in bachelor's projects or master's theses, for example.

Generative AI will have consequences for everyday life in study environments

From a university pedagogical point of view, decisions about the direction of a programme/course will entail considerations about the consequences for students and lecturers everyday life on campus. Where does the existence of generative AI leave teaching staff and students in their collaboration on academic goals and the future practice of courses? Generative AI tools present dilemmas that affect the here-and-now context on programmes:

If choosing direction #1: no use of artificial intelligence: During the study process, students have access to AI tools, some of which must be sought out while others are conveniently present in software such as Word or Excel. It can be challenging for students to realise whether they have used AI tools. If generative AI is not allowed, it could prove difficult for staff and students to talk about generative AI tools during the study process. Currently, it is not likely that technical analyses can reliably evidence the use of generative AI.

If choosing direction #2: defined use of generative AI is allowed: staff and students can talk about how best to use the tools and how to argue for the implications the tools will have on academic standards. Students may still have access to tools that are not allowed, which may compromise transparency. Communication between staff and students about certain use of generative AI is probably made easier if decisions can be argued for and stated clearly with reference to the intended learning outcomes.

If choosing direction #3: All generative AI is allowed: VIP and students can talk about all aspects of AI tools and students can demonstrate their independent work when using the tools. Full transparency is possible. Generative AI becomes a theme for good academic practice and is included in the assessment of exam performances.

The working group on generative AI under University of Copenhagen's Academic board on Education Strategy will continue to produce materials for further developing programmes, courses and exams.