

GUIDELINES FOR THE USE OF ARTIFICIAL INTELLIGENCE IN THE UNIVERSITY OF LATVIA



**UNIVERSITY
OF LATVIA**

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INTRODUCTION

Artificial intelligence (AI) technology and innovations have experienced rapid development in recent years. It has created new opportunities for using AI at work, in studies, and everyday life. Considering the growing range of generative AI tools and their availability to wider society, the introduction of these tools and the challenges associated with them in the study process is inevitable.

University of Latvia (UL), as a science university, is oriented towards an open, innovative, and excellence-based work and study environment. The UL supports technological innovations, their development, and responsible use in the study process and research. The professional growth of the teaching staff in their ability to apply innovative learning and teaching methods, to adapt to new technology in the study process, as well as students' ability to master these technologies, and develop new digital skills that are and will be important to become competitive specialists and experts of their fields in the labour market, are important for the UL. Therefore, responsible and thoughtful use of AI tools in UL is not only permissible but also encouraged.

In response to the rapid and widespread introduction of AI tools in higher education, we would like to provide initial insight and support with these guidelines to teaching staff and students in the use of AI tools in studies and research.

The general goals of these guidelines are:

1. To help UL teaching staff and students navigate the opportunities provided by AI and to be aware of the risks associated with its use. Conceptual solutions for mitigating the impact of these risks are offered in these guidelines.
2. To inform about the ethical aspects of using AI tools, and to promote responsible, honest, and creative use of AI tools in the study process, observing the principles of academic integrity.

Teaching staff of the UL can permit or prohibit the use of AI tools in their study course. The use of AI tools depends on the intended goals and study results of each study course, as well as the possibilities of their use also differ between different fields of science. Teaching staff and students must use AI tools responsibly, honestly, and ethically.

UL will update these guidelines according to the development of regulations internationally and in Latvia, UL will also review and update the internal regulations related to the study process as the experience of using AI develops and becomes clearer.

1.

GENERAL CHARACTERISTICS OF THE ARTIFICIAL INTELLIGENCE

The concept of artificial intelligence and ideas about its use is more than 70 years old. Various specialised AI solutions have been available for years, however, the possibilities and potential offered by AI became noticeable to the general public relatively recently – with the appearance of such large AI models as ChatGPT, DALL-E, Copilot, Gemini, Grok, Sora, etc.¹

For example, machine translation tools are widely used not only in translation agencies but also in universities – for localisation of study materials, translation of promotional thesis summaries, translation of language datasets, etc. Specialised tools and platforms have been created for this task, that ensure the efficient and customised use of machine translation, thereby increasing the productivity of translators. There are also various tools for grammatical, stylistic and language improvement of the text, as well as tools for automatic speech recognition and transcription, which are used, e.g., for decoding interview recordings, and subtitling video lectures. However, each of them is a specialised AI solution that is machine-trained and capable of solving only a specific task. Large generative AI models have radically changed this situation, immediately understanding (zero-shot learning) and solving many tasks for which they have not been directly trained.

The general problem of AI, mainly using machine learning methods, is the systematic search for approximate solutions to tasks that are impossible or inefficient to solve algorithmically. Generative AI solutions are based on the idea of deep machine learning of language, hearing, and vision from a huge amount of text and audiovisual material samples. As a result, the trained AI models² can create or generate meaningful and useful answers and content (text, speech, images, video, music, computer

¹ An overview of the development of AI after the release of ChatGPT at the end of 2022 is given in Robert Dale's publication: Dale, R. (2024, January). A year's a long time in generative AI. *Natural Language Engineering*, 30(1), 201–213. <https://doi.org/10.1017/s1351324923000554>

² Artificial neural networks, whose numerical parameters are measured in billions have been gradually optimised during training, because of which the model can effectively predict (cyclically generate) text, speech, image, and other types of basic unit strings of the content.

programs, structured data, etc.) according to the instructions or prompts given by the user (see Figure 1.1), as well as can "remember" and consider the ever-widening context of the conversation.

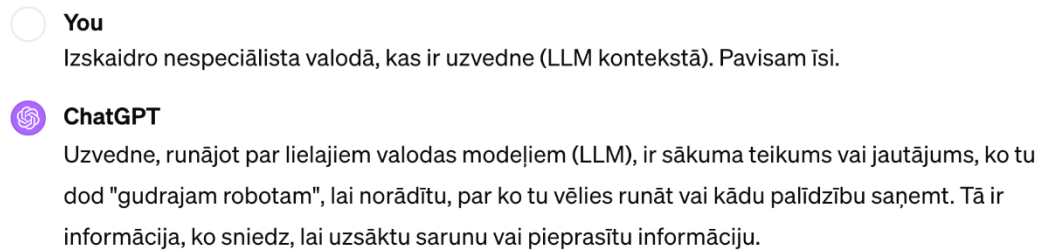


Figure 1.1: An example of a prompt given by the user (*You*) and a response generated by the model (*ChatGPT*).

For a more concrete idea of the opportunities provided by the generative AI in the study process, we recommend looking at, for example, the catalogue created by the education technology company *AI for Education*, which collects practically useful examples for the methodical creation of large language models (LLM) prompts (prompt engineering), including, for planning classes and assessments, evaluating results, facilitating administrative processes, etc. The world's leading universities also offer general guidelines as well as practical recommendations and examples for productive and responsible use of generative AI for both students and teaching staff. For example, the University of Edinburgh offers a very simple but quite universal template of task formulation that can be useful to begin learning prompting skills. Harvard University, on the other hand, provides recommendations and examples of prompts not only for text creation tasks but also for generating software source code, using spreadsheets, data analysis, etc.³

1.1. Basic operating principles of generative AI

Using generative AI models, it is helpful to understand the general principles of how they operate. Firstly, it should be understood, that such AI models do not "glue" together ready-made fragments of text, images or audio found on the Internet. In the case of textual information, the content is generated as one unit of text (token), i.e., word by word, but in practice, even smaller units are used – parts of words, frequent combinations of letters, even individual letters, symbols, punctuation marks and other characters (see Figure 1.2). At each next step, the model chooses one of the most reliable

³ *Generative Artificial Intelligence (AI)*. (n.d.). Harvard University Information Technology. <https://huit.harvard.edu/ai>

continuations, considering the context generated by the user and the model itself, and the distribution of probabilities at that moment among all possible units of text. For example, the huge, multilingual GPT-4 model resolves 100,000 different possible units of text balancing possible nuances of meaning and efficient computation, however, it is sufficient to produce any text in any language. Models for generating (predicting) images, voice, protein structures and other types of content or data, where instead of units of text, e.g., pixels and other small data units and their “context” are used, work under a similar principle.

Generatīvā MI modeļi "neļīmē" kopā gatavus, internetā atrastus teksta, attēlu vai audio fragmentus.
Generative AI models do not "glue" together ready-made fragments of text, images or audio found on the Internet.

Figure 1.2: Examples of how text is divided into units when analysed/synthesised by GPT-3.5 and GPT-4 models.⁴ The training data in English has been many times larger, so the English text is divided into linguistically more meaningful units, which helps the model to distinguish the meanings of words more accurately.

Secondly, large multilingual models “learn” the world's knowledge and connections during training without specifically distinguishing between languages, thereby the transfer of knowledge between languages is realised. But even the terabyte-scale training data sets of Google, OpenAI, Meta, xAI, and other tech giants do not capture the specific knowledge of all cultures, nations, and domain-specific knowledge equally, which is limited by the available training data in respective languages and domains.

Thirdly, the current version of any generative AI model we use at a given moment is fixed, i.e., AI models do not continue to learn and improve by themselves during their use (except the context window of the current conversation or work session), but are periodically trained either completely anew, or by improving the behaviour of existing models (following instructions), updating facts, expanding knowledge of languages and domains. Respectively, users themselves do not directly train these models, but consciously or unconsciously participate in the preparation of additional training data.

Skilled users of generative AI can increasingly solve the filling of the "gaps" in the model's knowledge, and the purposeful limitation of the topic and scope of the task, as well as the adaptation

⁴ See *gpt-tokenizer playground*. (n.d.). <https://gpt-tokenizer.dev>

of the model's behaviour and skills to the needs of the specific task, preparing the task's context and prompts as creatively and accurately as possible. Therefore, the context window, or the number of data units (e.g., units of text) that a given model can "keep in mind" and analyse within each work session, is another essential property of generative AI, which opens ever-widening possibilities for specialised and personalised performance of tasks and analysis of broad interconnections (see Figure 1.3).

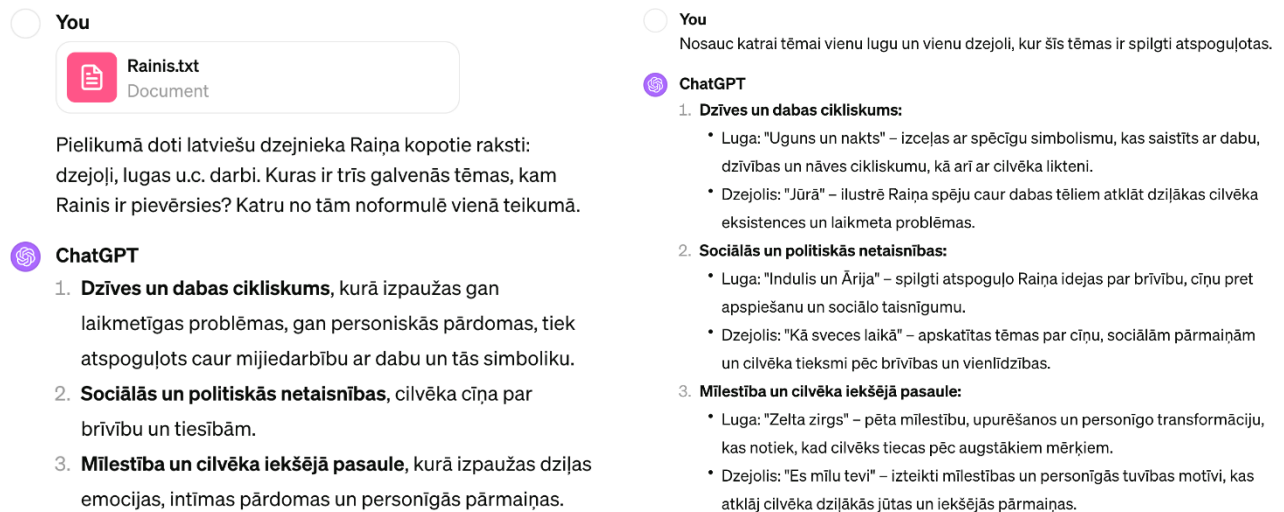


Figure 1.3: GPT-4's immense context window allows you to analyse, for example, the entire corpus of Rainis's poems and plays.

The size of the context window of the widely available large language models has grown rapidly over the last couple of years from a thousand text units to up to 128 thousand (e.g., GPT-4 and Gemini 1.5 Pro), moreover, a context of 1 million units is already available for a limited group of Gemini Pro users, as well as experiments continue to effectively provide multimodal context window of 10 million units.⁵

1.2. Opportunities and risks using generative AI

Large language models, such as GPT-4, show good results in programming, data processing and analysis, mathematics, physics, chemistry and solving other tasks, testing literacy and taking optional tests in a wide variety of subjects – not only in English but also in Latvian.⁶ AI models adapted to

⁵ Gartenberg, C. (2024, March 4). *What is a long context window?* Google. <https://blog.google/technology/ai/long-context-window-ai-models/>

⁶ OpenAI. (2023). *GPT-4 Technical Report*. <https://cdn.openai.com/papers/gpt-4.pdf> (see Chapters 4 and 5)

specific domains, tasks and languages are being built increasingly based on general models, thus improving the performance and reliability of these models.

AI text creation tools are used more and more as assistants in the study process and decision-making, inquiring and discussing various questions, as well as in the preparation process of research project applications⁷ and scientific publications^{8,9}, creating research questions, developing methodology, structuring content, searching for sources, preparing summaries and abstracts, interpreting, and evaluating the results, and assessing the self-prepared final thesis, publication or project application. The authors themselves still are and remain responsible for the originality of the content, the truthfulness of the facts, and the validity of the statements. Direct use of generated content presenting it as a part of one's work should always be carefully considered in the context of academic integrity and ethics, as well as the reliability of scientific research and claims.¹⁰

AI models are also used in other related tasks for generating content or data: synthesis of video and animation, speech and music, and creation of various types of images and drawings, e.g., generating visual materials and datasets in cognitive sciences. In addition to the generative function, AI models are also widely used in data analysis, such as predicting protein structures¹¹, and identifying anomalies and deviations in medicine, finance, and other fields.

There are various risks associated with the use of AI, which the user must be aware of and try to minimise their impact as much as possible. General risks to be aware of when using AI solutions:

⁷ The European Research Council recently issued a warning about the responsibility of the author, i.e. the human, when submitting project applications that contain AI-generated text: *European Research Council issues warning on AI's use in grant applications* | EURAXESS. (n.d.). EURAXESS. <https://euraxess.ec.europa.eu/worldwide/asean/news/european-research-council-issues-warning-ais-use-grant-applications>

⁸ Huang, J., & Tan, M. (2023). The role of ChatGPT in scientific communication: writing better scientific review articles. *American journal of cancer research*, 13(4), 1148–1154.

⁹ Khalifa, M., & Albadawy, M. (2024, March 1). *Using Artificial Intelligence in Academic Writing and Research: An Essential Productivity Tool*. Computer Methods and Programs in Biomedicine Update. <https://doi.org/10.1016/j.cmpbup.2024.100145>

¹⁰ Birhane, A., Kasirzadeh, A., Leslie, D., & Wachter, S. (2023, April 26). *Science in the age of large language models*. Nature Reviews Physics. <https://doi.org/10.1038/s42254-023-00581-4>

¹¹ Jumper, J., Evans, R., Pritzel, A., Green, T., Figurnov, M., Ronneberger, O., Tunyasuvunakool, K., Bates, R., Žídek, A., Potapenko, A., Bridgland, A., Meyer, C., Kohl, S. A. A., Ballard, A. J., Cowie, A., Romera-Paredes, B., Nikolov, S., Jain, R., Adler, J., . . . Hassabis, D. (2021, July 15). *Highly accurate protein structure prediction with AlphaFold*. Nature. <https://doi.org/10.1038/s41586-021-03819-2> – AlphaFold uses the same deep machine learning technology (Transformer) that was originally created for natural language understanding and generating of the text.

1. **Data security.** To avoid leaks of personal data and other sensitive or confidential information, such data must not be provided to third-party AI systems. Disclosure of such information violates data protection requirements.
2. **Bias and stereotypes in the content created by AI.** It has been observed that text generated by generative AI can contain stereotypes and prejudices such as gender discrimination¹² and racism¹³, the content can also be offensive. Therefore, AI-generated content, especially if it is intended to be included in any kind of authored work, should always be reviewed, and evaluated.
3. **Trustworthiness of AI-generated content.** It should be taken into consideration that the information provided by generative AI may be inaccurate, erroneous or even incorrect, so one must always make sure of its correctness. For example, if generative AI is used to explain rarely used or brand-new terms, or to obtain citations and references, etc., the generated information may be inaccurate, erroneous or even incorrect. On the other hand, if generative AI is used for the synthesis of data sets, one should be aware that such data may contain, for example, factual errors and incongruous information.

Using large language models, one must also keep in mind the strengths and weaknesses of these models in at least two aspects related to content generation:

1. The ability to “understand” the prompt and to generate corresponding, correct content;
2. The ability to generate the content in a qualitative language.

Multilingual AI models are often able to generate fluent text, including in "small" languages, such as Latvian, which often creates the illusion of the truthfulness and reliability of the generated content. However, such texts may contain factual errors, called ‘hallucinations’, which result from the nature of generative AI models – to always be able to generate the next probabilistic string of words or units of text. Such factual errors and misjudgements are particularly common in fields and languages where there was insufficient data to train the model. For example, ChatGPT in Latvian tends to create new

¹² Ananya. (2024, March 19). AI image generators often give racist and sexist results: can they be fixed? *Nature*, 627(8005), 722–725. <https://doi.org/10.1038/d41586-024-00674-9>

¹³ O’Donnell, J. (2024, March 11). *LLMs become more covertly racist with human intervention*. MIT Technology Review. <https://www.technologyreview.com/2024/03/11/1089683/lms-become-more-covertly-racist-with-human-intervention/>

words and use sentence constructions typical of the English language, as well as often makes mistakes in topics about Latvian literature, culture, and other national matters (see Figure 1.4).

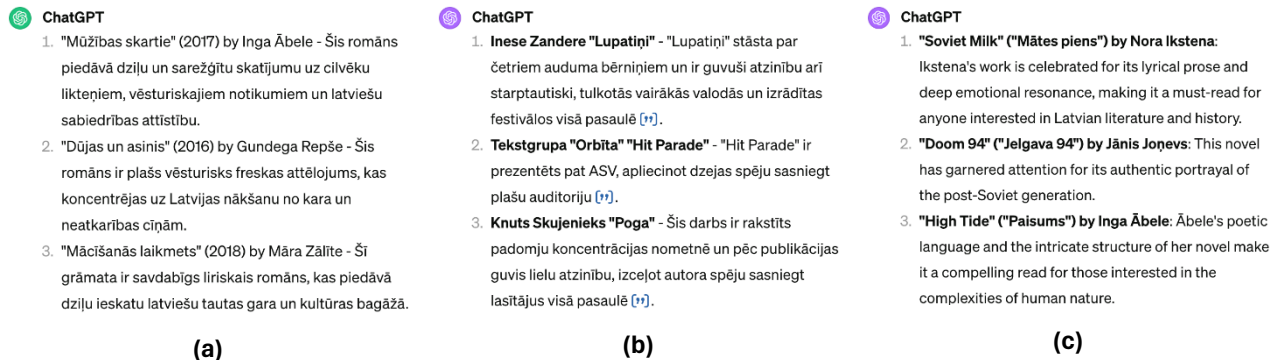


Figure 1.4: (a) – Free ChatGPT-3.5; (b) and (c) – paid ChatGPT-4. (a) and (b) generated with the prompt "Recommend three works of modern Latvian writers that a student of Baltic philology should read.", (c) generated with an analogous prompt in English. Firstly, there is a significant difference in the correctness of the content and the quality of the Latvian language between the GPT-3.5 and GPT-4 models (the GPT-4 neural network is 10 times larger). Secondly, prompts given in English are understood more precisely, and the amount of relevant information during model training in English has been wider.

It is difficult for the user to influence the flow of language of AI models in such situations, however, the user can influence the information available to the model, more accurate "understanding" of the instructions, and generation of more adequate content in two ways:

1. By formulating the prompt in English but asking to generate the answer in Latvian if necessary, or by clarifying the meaning of certain words in the prompt in Latvian, for example, indicating the translations of terms in English in parentheses, or by clarifying the meanings of misunderstood words in the subsequent dialogue (see Figure 1.5);
2. Preparing the context of the conversation and limiting the scope of the model: adding the set of data necessary for the performance of the task – text corpus, structured data, programme code, images and the like, as well as instructing the model with a prompt that future responses should be created using the information provided in this data set, i.e., context (see Figures 1.3 and 1.6).

 ChatGPT

Vidukļa apkārtmēru mēra ar šādu formulējumu:

$$C = 2\pi r$$

kur:

C ir vidukļa apkārtmērs,

π ir matemātiska konstante pi, kas ir aptuveni 3.14159,

r ir vidukļa rādiuss.

Ja jums ir dots vidukļa diametrs, jūs varat to dalīt uz 2, lai iegūtu rādiusu.

Pēc tam, ievietojiet rādiusu šajā formulējumā, lai iegūtu vidukļa apkārtmēru.

(a)

 ChatGPT

Lai izmēritu vidukļa (waist) apkārtmēru, jums būs nepieciešama mērlente.

Šeit ir soli pa solim instrukcija:

1. **Atrodiet Savu Vidukli:** Viduklis parasti atrodas starp ribām un gurniem, tieši virs jūsu gūžas kaula. Tas ir arī vieta, kur jūsu ķermenis saliekas, kad jūs noliecaties uz sāniem. Parasti tas ir visšaurākais jūsu vēdera daļas punkts.
2. **Sagatavojieties Mērījumam:** Valciet elpošanai ērtu apģērbu vai izmēriet uz plikas ādas, lai iegūtu precīzākus rezultātus. Stāviet taisni, relaksēti.
3. **Izmantojiet Mērlenti:** Paņemiet mērlenti un apvijiet to ap savu vidukli. Pārliedzieties, ka mērlente ir paralēla grīdai un ka tā nav savīta vai saplacināta pret ķermeni. Mērlentei jābūt pieguļošai, bet ne ciešai – tā nevajadzētu ierakties ādā.

(b)

Figure 1.5: (a) Answer to the question "How is waist circumference measured?" – the word 'waist' was misunderstood in the original version of GPT-4 as 'circle'. (b) New answer by clarifying the translation of the word 'viduklis' – 'waist' in the continuation of the dialogue.

More and more AI tools, such as Perplexity.ai, ChatGPT-4 and Gemini (depending on the prompt), prepare the current context for the language model automatically by selecting information relevant to the user's query from websites and databases.¹⁴ However, to control the selection and completeness of information, manual context preparation is still relevant, keeping in mind the limited size of the context window. It can be useful both for the analysis of information in a specific data set and, for example, for generating questions or tests about the material learned in the course (see Figure 1.6a), for generating the structure of presentation slides from lecture materials or a publication prepared for a conference, for a deeper understanding of a specific presentation or publication etc. Similarly, the generation of various scripts for the automated processing and analysis of data sets can be guided by a description of the data format given in the context of the prompt or specific samples of structured data (see Figure 1.6b) however the user should ascertain the correctness of the created programme.

¹⁴ It is called a RAG method – "Retrieve, Augment, Generate".

You

N-gram_LMs.pdf
PDF

Given the attached slides on statistical language modelling, generate a 10-question quiz.

ChatGPT

Question 1: What is the primary goal of a statistical language model?

A) To assign probabilities to sequences of words
B) To translate languages automatically
C) To correct grammar in text documents

Question 7: What does the perplexity measure?

A) The complexity of a sentence
B) The likelihood of a test set given the model
C) The uncertainty of the model in predicting the next word

Question 10: Why might we use backoff or interpolation in N-gram models?

A) To use less context in situations where we have limited training data
B) To increase the computational speed of the model
C) To simplify the model for easier understanding

Answers:
1: A, 2: B, 3: B, 4: B, 5: B, 6: A, 7: C, 8: B, 9: A, 10: A

(a)

You

Given the following comma-separated data sample that lists countries, their capitals and population:

```
Country,Capital,Population
Latvia,Riga,1907675
Lithuania,Vilnius,2794700
```

Create a Python script that:

- 1) Reads such data from a countries.csv file;
- 2) Calculates the total and average population of the countries.

ChatGPT

You can use Python with the `pandas` library, which is excellent for handling and analyzing structured data like CSV files.

```
python Copy code
import pandas as pd

# Step 1: Read the data from a countries.csv file
data = pd.read_csv('countries.csv', header=None, names=['
```

(b)

Figure 1.6: (a) Example of generating the multiple-choice test from lecture materials using ChatGPT-4; it can be especially useful for generating wrong answers; Latvian translation can be assigned to the language model itself, but a better-quality result will probably be obtained using a suitable machine translation tool. (b) Example of generating a Python script to analyse a structured data set according to the sample data given in the prompt and the analysis task.

The opportunities provided by AI and the risks related to its use inevitably urge us to rethink existing approaches to solving tasks and acquiring skills in different fields, including, the study process, although it does not mean that the role of a human and his or her importance in these processes that are affected by the AI is insignificant. It is necessary to seriously evaluate often publicly expressed concerns about **the risk of human skills disappearing**, that is related to the loss or non-acquisition of personal or field expert skills, or in the context of UL – with the failure to achieve study goals and results if AI is used ineptly and uncritically. For example, a recent survey,¹⁵ of the world's leading AI researchers raised concerns about the long-term disappearance of human skills as more and more tasks are outsourced to AI.

¹⁵ Grace, K., Stewart, H., Sandkühler, J. F., Thomas, S., Weinstein-Raun, B., & Brauner, J. (2024). Thousands of AI authors on the future of AI. *arXiv preprint arXiv:2401.02843*.

2.

ETHICAL ASPECTS OF GENERATIVE ARTIFICIAL INTELLIGENCE TOOLS

AI, as it currently enters the study process, can be considered a tool that is used to achieve certain goals. It is not known how AI will affect people's understanding of learning, science, and creativity in the long term, but for now, it is only a tool. Although various predictions about the impact of AI on the future of humanity appear in the public space, currently humanity continues to exist and AI does not release its users from responsibility for their actions and does not abolish academic integrity, as well as other ethical norms.

The values, ethical principles and norms that are binding to students, academic, scientific, and general staff of the UL, in one word – the UL Community, are defined in *the Academic Ethics Codex of the UL*, *the Regulations for Academic Integrity at the UL*, and the mission and values of the UL as defined in *the UL Strategy 2021–2027*. As AI enters the UL study environment, these norms and values remain.

2.1. Ethical principles

Along with the availability of generative AI tools to a wide range of users, the interest in the potential impact of AI on various areas of human activity and the risks it creates is growing dramatically. On the one hand, the awareness of this impact creates a demand for regulation that could reduce the risks, on the other hand, there is currently no consensus on the extent to which the creation, development and use of AI should be regulated, while not losing the benefits that AI solutions can bring to society. Therefore, independently of legal regulations, for example, *the EU Artificial Intelligence Act (2024)*¹⁶, different institutions have defined ethical frameworks that could assist in evaluating AI tools and their impact. Such documents are *the UNESCO Recommendation on the Ethics of Artificial*

¹⁶ *The AI Act Explorer | EU Artificial Intelligence Act.* (n.d.). <https://artificialintelligenceact.eu/ai-act-explorer/>

Intelligence (2022)¹⁷ and the *Ethics guidelines for trustworthy AI of the European Commission* (2019)¹⁸. It should be noted that these documents view AI technology in general, including ethical risks that are related to its creation and development, therefore not everything that is mentioned in it is directly applicable to the study process, although without a doubt the questions that concern the ethical development of AI are not separable from the questions about their ethical use.

In any case, many universities around the world have considered it necessary to formulate their guidelines and recommendations for the use of AI and have also included ethical principles in them. For example, one can name *the Russell Group Principles on the Use of Generative AI Tools in Education*¹⁹ adopted by the Russell Group of Universities of the United Kingdom and *the Guidance on the Use of Generative AI and Large Language Model Tools* (2023)²⁰ of California Institute of Technology.

The five principles of academic ethics emphasised in *the Academic Ethics Codex of the UL* – academic freedom, fairness and justice, responsibility, loyalty, respect, and collegiality – are also applicable to the use of AI at the UL and help to evaluate the ethics of its use.

2.2. Ethical risks

2.2.1. Ethics of AI tools used

AI, like other physical or digital tools, can be created and developed in ethical and unethical ways. Although AI users are mostly not directly responsible for their creation, they take at least partial responsibility for their existence by using these tools. The choice of users to use or not to use specific tools expresses an attitude towards the values and principles conforming to which or against which they are created. In addition, the choice to ignore violations of ethical principles that occurred during the development process of specific AI tools also includes reputational risks for their user and UL. Accordingly, to mitigate the impact of negative risks, AI users should pay as much attention as possible to the conditions of creation and development of the tool used.

Most significant ethical risks that are related to the use of AI:

¹⁷ *Recommendation on the Ethics of Artificial Intelligence*. (2023, May 16). UNESCO. <https://www.unesco.org/en/articles/recommendation-ethics-artificial-intelligence>

¹⁸ *Ethics guidelines for trustworthy AI*. (2019, April 8). Shaping Europe's Digital Future. <https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>

¹⁹ *New principles on use of AI in education*. (2024, April 9). The Russell Group. <https://russellgroup.ac.uk/news/new-principles-on-use-of-ai-in-education/>

²⁰ *Generative AI*. (n.d.). Information Management Systems and Services. <https://www.imss.caltech.edu/services/ai>

- **manipulation of the user** – the content created by AI must not limit the ability of its users to independently evaluate information and make decisions, manipulative AI limits the freedom of human beliefs, including academic freedom;
- **biases embedded in the product** – one should be aware that AI tools create content according to the data available to them, and the availability or selection of data may in some cases create content that is tendentious or biased and contradicts the requirements of fairness and respectful attitude;
- **unfair and discriminatory business practices** – *the Academic Ethics Codex of the UL* envisages the responsibility of the UL Community towards society, and by using AI tools, the process of creation and development of which has been unfair or discriminatory, the user may come into conflict with the values of society and the rights of individuals;
- **privacy violations** – the use of AI involves the collection, storage and exchange of data, and these practices involve risks of privacy violations, which the user must be aware of and take into account when deciding to use a particular tool or, for example, recommending it to others;
- **copyright infringement** – currently the issue of the rights of AI tool developers to use copyrighted works is widely discussed in various contexts, and the issue of legal and ethical frameworks for use is not entirely clear, so one should be aware that potentially some uses of AI may be recognised as contrary to the principles of honesty and respect.

Questions one should ask to assess the ethics of the AI tools used:

- What is known about the reputation of the AI tool developer?
- Has the developer of the AI tool formulated the ethical principles of its operation and to what extent these principles are implemented in reality?
- What is known about the approach and principles of the AI tool developer in the field of data collection, storage and exchange?
- Is the content of the AI tool inclusive, non-biased and non-discriminatory?

2.2.2. Ethical risks in the learning process (for students)

The goal of studies is to acquire new knowledge and skills. Accordingly, activities that interfere with the acquisition of knowledge and skills are contrary to this goal. A successful study process

cannot be ensured only by control, it is based on cooperation and requires trust between teaching staff and students, as well as among students. Therefore, the quality of the study process is determined not only by effective management and control methods but also by ethical values and principles. The use of AI in situations that conflict with the overall goal of the study and the objective of the specific learning task undermines both the study process itself and the trust necessary for it to be successful.

The most significant ethical risks associated with the use of AI in the learning process:

- **misleading content** – there are many ways how AI-generated content can be misleading – it may contain factual errors, present fiction as a reality, come up with tendentious generalisations, prejudiced stereotypes, and nonsensical stereotypes, which is why if the user does not review the AI-generated content and reproduce it as a truth, there is a possibility that the audience may be misled due to the reckless action of the AI user, therefore beliefs that are in contradiction with human respect and equality are disseminated;
- **deception about knowledge and skills of the author** – study works created in the study process, for example, texts or answers to tasks, are not interpreted and evaluated in and of itself but are used as evidence of the author's knowledge and skills, in addition, the teaching staff can use this evidence as reference-points in organising further study process. Whereas, concealing the information on the use of AI tools in the study work, the audience may be misled about the knowledge and skills of the authors and the study process is disturbed;
- **decrease in solidarity and trust** – AI tools, even existing, evidently decrease mutual trust in the higher education environment, which affects loyalty, respect and collegiality, and also ensurance of justice. Dishonest use of AI tools may exacerbate this situation and lower opportunities to increase trust;
- **dishonest competition and injustice** – dishonest use of AI tools creates misleading perceptions about the knowledge and skills of the author of the study work, and as a result, it is not just towards those who act honestly and according to rules.

Questions to ask oneself to evaluate the ethics of the use of AI tools in the study process:

- Can I take responsibility for everything that has been said and done in the study work?
- Does the use of the specific AI tool not contradict the purpose and nature of the studies?
- Is the use of AI permitted or forbidden for completing a specific task?
- Is it indicated in the study work how the AI tools were used?
- Has the use of AI been discussed with the teaching staff of the course in case of uncertainty?

2.2.3. Ethical risks in the teaching process (for UL personnel)

AI technology will undoubtedly change the study process – learning and teaching. However, the need to change this process does not mean that AI makes it senseless or unnecessary, and the ban on AI tools most likely will not prevent these problems. On the other hand, at least for now, there is no reason, with the use of AI technology in the study process, to abandon the basic goals of higher education or principles of academic integrity. But there is a reason to believe that AI tools involve different risks to the learning process therefore it is necessary to identify these risks as much as possible, and organise the learning process in a way that minimises these risks.

The most significant ethical risks associated with the use of AI in the teaching process:

- **misleading content** – using AI in the creation of curriculum or the assessment of study work, it is necessary to be aware that the content created by AI, such as a summary of the text, may be erroneous and the teaching staff is always responsible for the content of the classes and the assessment of the study work. Moreover, if the content of the teaching staff's classes and feedback provided to the students is such that it could be fully done by AI then the need for the teaching staff is questionable;
- **erroneous and unfair assessment of academic work** – dishonest use of AI in students' study work creates a whole series of risks – it makes it difficult to achieve the goals of the learning process, creates difficulties in assessing students' knowledge and skills, makes a comparison of different student study works problematic, and since there are no technical means, how to accurately clarify the use of AI in study work, an assessment of the entire learning process and student assessment methods is necessary;
- **conflicts due to misunderstandings** – currently there is no consensus on the evaluation of AI in the context of education, so it is important to be aware that what seems obvious to one

person is not so to another, and in cases where the rules or limitations of using AI tools are not discussed clearly, conflicts and accusations may arise for injustice or dishonesty in the actions of one or the other party involved;

- **decrease in trust** – it is already observed that the introduction of AI into the educational environment increases mistrust between teaching staff and students, and although there is a reason to question the effectiveness of various teaching methods that have worked sufficiently successfully in the new conditions, mutual trust is necessary for the study process, which is why active action is required to maintain or increase the trust;
- **decrease of solidarity** – if the students are required to use AI tools honestly and to be transparent about this use, then the lack of equality, honesty and openness can reduce the willingness of students to show solidarity for the sake of common goals, as well as arbitrary and unexplained restrictions on the use of AI tools to students can reduce solidarity;
- **discriminatory content** – AI opens wide opportunities not only for students but also for teaching staff and researchers, preparing materials necessary for the study process and conducting research. However, the technical limitations of AI tools create the risk of erroneous and discriminatory generated content, which may include factual and interpretive errors, stereotypes and prejudices, material inconsistent with academic freedom, human dignity, and other important societal values;
- **decrease of equal opportunities and inclusivity** – AI tools are not available to everyone equally, therefore, when incorporating the use of AI tools into the study process, it is necessary to evaluate the availability of specific AI tools to different groups of students and conformity of these tools with students capabilities and needs, to prevent a situation where the use of AI tools in the study process increases inequality unjustifiably among students or promotes discrimination;
- **violations of rights** – by requiring students to use certain AI tools during the study process, there is a risk that their rights are violated, for example, the right to privacy, if the developer of the AI tool requests personal information from the user or collects their data.

Questions to ask oneself to evaluate the ethics of AI use in the teaching process:

- Are the principles of using AI and other tools discussed at the beginning of the study course and before assessments?
- Is this use indicated in the study materials the content of which was created by using AI?
- Does the requirement to use AI tools in the study process contribute to inequality, discrimination or violation of some rights?
- Does the use of AI promote or hinder an inclusive study process?
- Is there a clear procedure for resolving ambiguities and conflicts related to the use of AI in the study process?

2.3. Ethical use of AI tools

To promote the fair use of AI tools in the study process and reduce the possibility of conflict with the values of the UL and principles of academic ethics, it is advisable to incorporate these principles and practices in the study process:

- **Responsibility** – the AI user is responsible for the choice of AI and the use of AI-generated content in the learning work.
- **Honesty** – the AI user acts according to the study goals in the study process, by observing the rules and restrictions of AI use in the specific situation without deception.
- **Transparency** – all parties involved in the study process are open about the use of AI.
- **Communication** – the rules and restrictions of the use of AI are justified, known and available to all involved parties (information in the first class of the study course, in the e-study environment), in case of conflicts and uncertainties, the involved parties discuss the situation and seek a joint solution.
- **Respect** – the user of AI tools evaluates the compliance of AI-generated content with human dignity, justice, privacy, and other essential values.
- **Justice** – the use of AI tools in the study process should not be discriminatory and promote inequality, it should promote the development of inclusive education, including providing support for students with special needs.
- **Rights** – the use of AI tools must not conflict with the rights of individuals, including the right to privacy, civil rights, and copyrights.

2.3.1. Documenting the use of AI tools

A generative AI like ChatGPT is just a tool and in that sense, it is not much different from other tools such as a calculator, a translation programme or a text spell checker. And each of these tools can be a perfectly legitimate or illegitimate aid in a given context. For example, if a person prides himself on his ability to do calculations in his head, but it turns out that he is doing everything with a calculator, we would consider calculating with a calculator in this context to be dishonest. On the other hand, in a situation where only the result of the calculation is important and not how it was achieved, it is not important whether a calculator was used.

The same goes for referring to other aids used – whether it's fair to say that a translation programme, grammar checker or generative AI is used will depend on the context. And in the case of UL, it is about the context of the study process. If in the context of the learning task, it is important to understand how the author arrived at, for example, a specific text or translation, then it is also important to indicate what the author has formulated entirely independently and what – with the aid of AI tools.

Therefore, it is recommended that requirements for references to the use of AI tools be formulated in all fields of study according to the specifics of the relevant field, study course or learning task.

Another thing is that in the current conditions when the use of AI tools is associated with the re-evaluation of the study process and the impression that AI tools will have on it is not yet clear, it is recommended to indicate the use of AI tools in study works as openly as possible. Although generative AI cannot be considered an author, neither can it be claimed that the author of the study work has independently created the content generated by AI. Therefore, in cases where AI has been used to generate content, it is recommended to cite the AI tool used, both for direct quotation and retelling of AI-generated content.

The user can refer to the tools used by AI in the following ways:

APA-style references to the use of an artificial intelligence tool in the text²¹:

In-Text Citation:

(OpenAI, 2023)

Full Citation:

OpenAI. (2023). ChatGPT (Mar 14 version) [Large language model]. <https://chat.openai.com/chat>

Harvard University-style reference to the use of artificial intelligence in the text²²:

In-Text Citation:

(ChatGPT, 2023)

Full Citation:

ChatGPT. (2023) "How to Cite ChatGPT in Different Writing Styles." Chat conversation.

MLA-style reference to the use of artificial intelligence in the text²³:

MLA does not recommend crediting the program developer as the author of the text!

In-Text Citation:

("Describe the symbolism")

Full Citation:

"Describe the symbolism of the green light in the book *The Great Gatsby* by F. Scott Fitzgerald" prompt. ChatGPT, 13 Feb. version, OpenAI, 8 Mar. 2023, chat.openai.com/chat.

2.3.2. AI and plagiarism

AI-generated content can be very similar to human-generated content, and often indistinguishable from human-generated content (it may even be of higher quality than a given human's ability to create equivalent content).

AI-assisted content creation and plagiarism are not comparable cases.

By default, AI-generated content is not considered plagiarism, but the use of an unauthorised aid.

Considering that in the process of training AI models, various types of authors' works are used on a large scale, and the user can also include the works of other authors as a part of the prompt, the risk of plagiarism also exists in the context of using generative AI. If the user generates or transforms

²¹ McAdoo, T. (2023). *How to cite ChatGPT*. Apa.org. Pieejams: <https://apastyle.apa.org/blog/how-to-cite-chatgpt>

²² Ingram, O. (2023, May 3). *How to Cite ChatGPT - Format & Examples*. ResearchProspect. Pieejams: <https://www.researchprospect.com/how-to-cite-chatgpt-format-examples/#:~:text=Harvard%20style%20is%20a%20popular>

²³ *How do I cite generative AI in MLA style?* (2023, March 17). MLA Style Center. Pieejams: <https://style.mla.org/citing-generative-ai/>

the works of other authors or their fragments, there is a possibility that this will be detected by the existing plagiarism control systems.

As the use of generative AI in society increases, various automated tools for recognizing AI-generated content have also been developed, but one should be cautious in their use. Tools that claim such capabilities are imperfect²⁴ – they can recognise human-written text as AI-generated, and vice versa. The ability of these tools to recognise AI-generated text is not high, and false positive results are obtained relatively often. This means that the risk of falsely accusing the student of using generative AI in the given task is quite high. Also, the rapid change and development of generative AI tools limits the ability of AI recognition tools to accurately recognise AI-generated text. Therefore, one of the surest ways to reduce the influence of AI-generated content on the study process is to re-evaluate and rethink the types of tasks and assessments assigned during the study process.

²⁴ Weber-Wulff, D., Anohina-Naumeca, A., Bjelobaba, S., Foltýnek, T., Guerrero-Dib, J., Popoola, O., Šigut, P., & Waddington, L. (2023, June 21). *Testing of Detection Tools for AI-Generated Text*. arXiv (Cornell University). <https://doi.org/10.1007/s40979-023-00146-z>

3.

USE OF GENERATIVE ARTIFICIAL INTELLIGENCE TOOLS IN THE STUDY PROCESS FOR TEACHING STAFF AND STUDENTS

3.1. AI in the work and professional development of the teaching staff

With the expansion of the possibilities of using AI in education, as well as the development of diverse smart learning systems, international organisations such as UNESCO^{25, 26}, the European Commission²⁷, the European University Association²⁸, and researchers from various fields emphasise that the need for highly qualified teaching staff will not disappear in higher education. However, inevitably, the role and tasks of the teaching staff in the study process are changing dynamically. Thus, teaching staff must also continuously learn new skills that would allow productive use of AI solutions in both pedagogical and research activities, as well as administrative work.

Insufficient development of digital skills may be one of the reasons why teaching staff do not use AI and prohibit students from doing so. However, a ban is not a solution, and to ensure the quality of the study process by students studying field-related or interdisciplinary learning content, the opportunities to also use AI tools purposefully must be included, whilst simultaneously promoting critical understanding and responsible attitude in its use in student's potential and existing fields of activity. To decide how and which AI tools to use, both teaching staff and students should have a safe opportunity to gain experience in their use and reflect on it during the study process.

Along with the development of the AI field, the development of appropriate knowledge, skills, and attitudes of those involved in higher education should also be promoted. *AI literacy in education* includes the knowledge, skills and attitudes needed as a foundation in an education space that is enriched not only with digital technologies but also with AI solutions. AI literacy is formed from digital

²⁵ *Recommendation on the Ethics of Artificial Intelligence*. (2023, May 16). UNESCO. <https://www.unesco.org/en/articles/recommendation-ethics-artificial-intelligence>

²⁶ *Guidance for generative AI in education and research*. (2023, September 8). UNESCO. <https://www.unesco.org/en/articles/guidance-generative-ai-education-and-research>

²⁷ *European approach to artificial intelligence*. (2024, April 5). Shaping Europe's Digital Future. <https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence>

²⁸ *European approach to artificial intelligence*. (2024, April 5). Shaping Europe's Digital Future. <https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence>

competence, and it is based on a critical understanding of the variety of AI tools and principles of their operation, human interaction with existing and new AI tools, being aware of the possibilities and limitations of AI, the skills to create effective prompts and critically evaluate the information generated by AI, to make informed and responsible decisions about the use of it in one's life. A critical component of this literacy using AI in studies and research is ensuring academic integrity without losing humanity as the foundation of all values.

By learning the skilful use of AI, teaching staff can reduce the workload of technical and organisational work, thus freeing up time to focus on the human aspects of communication in the study process (for example, promoting student engagement, individualisation, differentiation, personalisation).

It should be noted that the variety and number of AI tools are significant and continue to grow, so one should critically and purposefully choose the most appropriate tools for the content, purpose, and intended results of your study course, such as text or image generation, editing or transcribing etc. Unless the taught course is related to the development of new AI tools, i.e. the research subject of the study course is not AI itself, then the number of AI tools used in any other study course can vary from 1 to 3 tools on average. To arrive at one's own 'tool kit', it is recommended to first identify which artificial intelligence solutions in the context of the content of the taught study courses will be important for the students in their careers also outside the study process (in independent studies, internship, work environment).

When choosing AI, it should be considered that the paid versions of AI tools offer much wider and better-quality options for processing large amounts of information, thus saving time. Consequently, there are also risks that students who skilfully work with paid versions of AI tools can generate content and achieve a work result that, in some cases, could be of higher quality than even their actual knowledge and skills. Such situations promote inequality and stratification. Therefore, to reduce such risks, a paid version such as ChatGPT can currently be used for personal needs, however, only the free version should be used in the study process to perform learning tasks, unless UL has provided access to a paid license for all teaching staff and students.

Recommendations for teaching staff for the use of AI in the study process:

1. Identifying the possibilities and risks of using AI in the study process can promote **collegial and self-organised learning**. It is recommended to purposefully discuss the use of AI in the study

process and share experiences with colleagues to jointly come to an understanding of how they can help improve the teaching-learning experience and achieve better quality study results for students. The use of AI must not be uniform in all study courses of the same study programme.

2. It is recommended to organise the **exchange of teaching staff's experience** in the use of AI as a demonstration and testing of practical solutions also at the level of faculties, fields of study and study programmes, which would help to integrate AI in one's study courses in a purposeful and coordinated manner. Experience in using the tools will also encourage colleagues' interest in learning more about AI tools themselves and will allow them to use these tools more confidently on their own.
3. **Conversations with students** about what AI tools they know and use in their everyday lives can be useful. Students who work in the industry in addition to their studies can provide valuable insight as to what tools are used to perform various tasks at their workplaces.
4. It is also useful to participate in some **thematic training seminars, webinars, and master classes, and listen to podcasts** about the progress of AI, and its use in pedagogical activities, in your industry, as in this way the **ideas and solutions** on justified use of AI in the study process may arise.
5. It is recommended **to initially use a purposefully selected AI tool in a familiar audience**, to obtain feedback on its use from learning participants and to share experiences with colleagues about what was achieved, what raises questions, what methodological ideas arise, how to integrate AI tools into the study process in the future.

Questions to ask oneself about using AI in work and the professional growth of teaching staff:

- Do I choose AI tools for use in my study courses, evaluating them in the context of the goal of the study course and the intended results?
- Do I know what AI tools students are using?
- Do I know how AI tools are used by students?
- Do I know what AI tools my colleagues are using?
- Do I know how AI tools are used by my colleagues?
- Does using the AI tool help improve my work as a teaching staff?

The integration of well-chosen AI tools in the study process should be seen as a continuous learning process, as there is a very rapid functional and content development of existing tools, transformation, and development of new tools.

3.2. Teaching and learning methods

Teaching staff can use AI tools at various stages of the study process – both when developing or updating study course descriptions, planning and preparing for classes, during the learning process, and assessments and evaluations. However, the use of AI tools in the study process cannot become an end in itself; it must be meaningful and grounded in insights about human learning.

Similarly to the remote learning experience, various digital tools (Padlet, Jamboard, Mentimeter, Miro, Jamboard, Lino, Canva, Genially, etc.) and meaningful use of AI tools (ChatGPT, Gemini, Microsoft Copilot, Perplexity, Adobe Firefly, DALL-E 2, Grammarly, Notion, Copyscape, etc.) essentially also helps to enrich teaching-learning methods in the study process. In addition, some digital tools also integrate AI solutions that might be useful, for example, Padlet's new function *Create with AI* allows you to create lesson plans, compile a list of recommended literature, create timelines, maps, and rubrics, which can be both relatively simplified, but can also be used for stimulating ideas or criticism in the study process.

It is necessary to integrate AI tools into the study process according to the goal of the study course and the intended results, promoting a meaningful, diverse, and interactive learning experience for students. The use of AI in the study process can diversify the teaching-learning process, make it more dynamic, and more exciting, promoting the development of students' interests, student engagement, maintaining attention, as well as helping to promote the development of current skills.

The use of AI tools should promote active, continuous, and responsible student participation, critical thinking, cooperation, and problem-solving skills in the student-centred study process.

The experience of universities in Latvia and other countries shows that if we allow students to try AI tools by performing specific tasks, which also includes reflection on the benefits and drawbacks of using this tool, students improve their skills and develop an attitude towards the critical and responsible use of AI tools. Therefore, to clarify various questions related to the content of the study course, for example, during the initiation/ actualisation or reflection phase of the class, you can ask

questions to your favourite chat tool and then jointly evaluate the quality of the answers, learning scientifically based content in the further course of the class. The quality of the questions asked also shows the understanding and experience of the students, their answers and comments on the answers given by chatbots in helping to clarify what the students have/ have not understood.

The teaching staff can ask students to complete a task using an AI tool, in a seminar or practical class, where students share the obtained results and discuss what, and why is incorrect/ correct, in which aspects of reliability they are unsure of, and arguments. During a discussion organised in this way, practical experience is gained in using AI tools in the study process, an understanding is also formed that the large language models underlying the operation of chatbots can generate false information and even non-existent data, i.e., create AI "hallucinations".

To prevent the risks caused by AI tools, flipped learning becomes important, which requires the student's independent work and intellectual effort before the classes but during the classes allows the use of interactive learning methods in a meaningful way as the students have the opportunity to discuss, cooperate and solve problem situations by deepening an understanding and strengthening skills by applying them in diverse contexts.

Generative AI solutions are unable to generate a qualitative reflection on human experience, that is, it will be possible to receive an answer, but it will be too technical and general. Therefore, the wider use of AI in studies reinforces the importance of reflection (how my thinking processes work, what my benefits are, and how to use and improve what I have learned further) in the structure of the study process. The student should have the opportunity to reflect on what he has done while performing study tasks, evaluating one's learning experience and results in planning further learning activities.

Teaching staff can use task content, criteria and feedback-generating tools in their work, such as [Eduaide.ai](#), and [Magicschool.ai](#), which help to perform a range of organisational tasks more efficiently however personal data and institutional data must not be entered into the chatbot unless it is a tool acquired with the purchase by UL with an institutional license, although even in such case all data protection principles must be followed.

If one has the necessary skills, then AI provides diverse opportunities to prepare teaching aids – methodological aids, visual aids, handouts and teaching materials – from the study content prepared by the teaching staff. However, in all such and similar cases, the content generated by AI tools must be

reviewed by the teaching staff themselves, critically evaluating the quality of the created content, and transforming it following the real scientific study content.

Questions to ask oneself about the use of AI in promoting the acquisition of the study content (teaching staff's perspective):

- Does the use of an AI tool help the student learn complex learning content more easily?
- Is this use indicated in study materials, the content of which has been created with AI?
- Is the task suitable for independent work due to the possible risks of using AI tools?
- Does the use of the AI tool contribute to the student's ability to ask questions, justify their answers and their skill to reflect?

The use of AI in every study course is not an end in itself, however, it should be taken into account that the students will have to use them in their future activities, so it is necessary to agree collegially on how and which AI tools we responsibly and legally use in our field²⁹, how we will promote their acquisition in the study process, allowing students to develop skills that are required now and in the future.

3.3. Acquisition of the study content

AI creates opportunities to deepen and improve the study experience by personalising one's learning approach and adapting it to individual needs and abilities. AI can help identify students' strengths and weaknesses by providing personalised assignments and offering additional resources in areas of the curriculum that need support.

AI can be very useful in improving the processing and analysis of large and complex information, offering students faster access to topical and relevant information, for example, in a large text document. Thus, students could consolidate and test their knowledge more effectively, provided that AI solutions are used **skillfully** and **responsibly**.

²⁹ Barkāne, I. (2023). Cilvēktiesību nozīme mākslīgā intelekta laikmetā. Privātums, datu aizsardzība un regulējums masveida novērošanas novēršanai. Rīga: LU Akadēmiskais apgāds. <https://doi.org/10.22364/cnmil.23>

Although AI offers many opportunities for improving the study process, it is important to maintain a balance and not forget that the social aspects of personal development and cooperation do not lose their crucial importance in the human learning process.

In acquiring study content, AI tools can be a learning assistant, but they do not replace the learning (process) and mastery (result), the intellectual activity of a person.

During the independent study work, students can use AI as a learning assistant or virtual assistant, as a consultant and idea generator. For example, to review recommendations for a more precise formulation of the research topic, for the initial creation of the research, or project structure, or for clarifying the structure you have created. AI solutions can be used in the process of independent learning in cases where the content to be learned is broad and complex. At the beginning of independent learning, one can give some prompts to the AI tool, to get to know the answers of the AI, then arrive at conclusions that coincide with what one already knows or thinks to know, what raises doubts, what must be clarified in a communication with the teaching staff, etc.

AI tools can be useful during the independent learning phase, preparing for assessments, getting a summary of a topic, getting a structured overview of a topic from one's own electronically taken notes, or getting a possible idea of unclear concepts. AI solutions in the learning process can help you paraphrase a text written by yourself or get a summary of the main ideas of a complex text and interpret the ideas. AI solutions such as [Scopus AI](#), [Research Rabbit](#), [Connected Papers](#), and [Scite.ai](#) can help you get an initial overview (also visual) of a topic of interest in different publications. However, it is always necessary, especially in the case of uncertainties and doubts, to verify the truthfulness and correctness of the results by asking the teaching staff, and fellow students, and to verify the information in scientific sources.

Responsible use of AI is related to the student's attitude towards one's learning, respectful attitude towards other parties involved in the study process and self-directed learning skills – skills to plan, organise, monitor and evaluate one's learning. Constant, long-term and uncritical use of AI tools can hinder the functioning of cognitive processes, and negatively affect the ability to think independently and make decisions. This is evidenced, for example, by situations where almost every question that arises, a problem that needs to be solved, task that needs to be performed is assigned to AI tools first.

To prevent these risks, everyone needs to reflect on their own experience of using AI tools and control their excessive use.

Questions one should ask to evaluate the use of AI tools in the acquisition of the study content:

- Why am I using this AI tool?
- Have I carefully considered what might be my answer and solution before I give prompts to an AI chatbot?
- Wouldn't I get a more reliable answer if I asked a person first (teaching staff, another student)?

3.4. Preparation of assessments and evaluation

In some cases, the wide, diverse possibilities of using AI tools and the risks related to the disregard for academic integrity in the study process prompt us to return to more traditional methods of teaching-learning and assessments. For example, it is necessary to evaluate the possibilities of using oral assessment forms more or organising written assessments in person, writing by hand, and forbidding the use of smartphones, smart watches, etc. during the assessment.

Strategies and methods that ensure authentic evaluation of students' knowledge, skills and competencies and prevent the breach of academic integrity should be used in assessments and evaluations.

Teaching staff should include conditions regarding the use of AI tools in the descriptions of their study courses and the e-study environment, specifying which AI tools or their types, such as text generating or editing tools, tools for generating and analysing visual materials, modelling tools, as well as indicate assessment criteria accordingly.

If the use of AI tools has taken place unskillfully, then it is easy to notice it in the structure of the work, in the presentation of the content – a peculiar style of expression, inconsistent categories, general phrases, tautological theses, etc. If the use has taken place relatively skillfully, for example, the student has reread and edited the text prepared by the AI tool, then suspicions may arise when noticing that the style of expression characteristic of the student has suddenly changed or the level of knowledge has rapidly improved. Therefore, it is useful to use combined forms of assessment, as well as to schedule methods that allow one to complete a larger task in several stages. Thus, at each stage

of the task, the student receives feedback as a part of the formative assessment but at the end - the summative assessment.

AI solutions should not be used in cases where the student has the task of developing and proving one's ability to create a structurally and grammatically correct text, to conduct independent research to strengthen one's understanding, which is necessary to be able to work with the acquired knowledge and skills further.

It is often pointed out that in the new conditions of the challenges posed by AI, the meaning of reports or argumentative essays as assessment methods is lost. However, the experience of the surveyed UL colleagues confirms that a report or an argumentative essay can also be retained as an assessment method if the conditions for the use of AI are precisely stated in the conditions of the assessment task and assessment criteria: the student must correctly indicate which tool(s) were directly used in the work, what prompts were formulated, as well as in the places where the text generated by AI was used, one should note corrections and comments that were made, also indicating the assessment of the use of AI – advantages and disadvantages. In the written forms of assessments, it is recommended to make the conditions of assessments more specific. For example, a report on the use or interpretation of a certain theory in a film, book or practical activity.

In the assessment criteria it is also valuable to indicate if the submitted work might raise suspicion about the unauthorised use of AI tools or its use without providing references, the teaching staff, following the principles of respectful communication, has a right to assign an additional assessment. Combined assessment forms are useful in cases where, for example, a student's written work is followed by an oral or practical assessment.

Questions to ask oneself about the use of AI tools in the preparation and evaluation of assessments:

- Is it possible to solve the prepared test task completely using some AI tool?
- Were students introduced to the conditions of using AI tools (permitted/ forbidden in taking study course assessments) and assessment criteria?

It is recommended that teaching staff avoid using the same assessment tasks every semester/ year. Changes can be made in task requirements and/or assessment criteria by informing students

about the requirements and assessment criteria at the beginning of the study course, as well as by publishing this information in the e-study environment. Teaching staff can use AI tools to generate a variety of questions, such as a multiple-choice test.

When preparing test-type assessments or tests, where some typical answers and solutions may also be expected, it is recommended that the teaching staff assign a relevant task to some suitable AI tools first. If the AI tool solves this task then it is not worth giving such a task to the students, especially if students could have access to devices with an Internet connection during the task.

In assessments, combining oral, written and practical assessment forms, if the student cannot answer some question of the assessment, or cannot solve some task, the student can be allowed to ask the relevant question or task in the presence of teaching staff, for example, ChatGPT, and then the student evaluates the received answer. Based on the answer, it can be concluded what the student understands, and what does not understand.

3.5. Taking assessments

Students should take into account that the use of AI in doing study work and taking assessments is permitted only if the teaching staff of each study course has permitted it, as evidenced by verbal information on the requirements and assessment criteria at the first class of the study course and in writing – in the study course description and/or in the e-study environment. Otherwise (according to *the Regulations for Academic Integrity at the University of Latvia*) it is considered a use of unauthorised aids.

If the teaching staff does not allow the possibility of using AI in the study course, but the students see such an opportunity in the specific study course or task then students can propose to the teaching staff to clarify the requirements, respecting the academic freedom of the teaching staff to choose methods, digital solutions and AI tools that are reasonably considered to be more suitable for achievement of the purpose and study results in a better quality.

When using AI solutions allowed by the teaching staff, the student must correctly indicate references in their work (see examples of formatting references in section 2.3.1. *Documenting the use of AI tools* of these guidelines), and in this case, the teaching staff can also evaluate the appropriateness of the use of AI and the student's contribution by critically analysing and evaluating the AI-generated content.

AI tools may not be used in cases where the student must prove one's knowledge, skills, and competence in the relevant academic or professional field of study. To responsibly use AI in the study process, the user needs content competence at least at the level of understanding and the ability to independently apply what has been learned, so that the information generated by AI can be critically evaluated and used, for example, in self-examination, strengthening of knowledge, etc.

The use of AI tools during assessments (taking interim examinations and final examinations) is prohibited unless it is permitted by the conditions for completion of the tasks (requirements, criteria) defined by the teaching staff.

Students who are unsure of the requirements of the teaching staff regarding the use of AI tools are encouraged to ask their teaching staff about these conditions.

Questions one should ask in the use of AI tools in taking assessments (students' perspective):

- Is the use of AI allowed or prohibited in taking a particular assessment?
- If I don't know whether the use of AI tools is allowed or prohibited in assessments, have I clarified this in time by asking the teaching staff of the study course?
- If the use of AI is NOT allowed in the assessment, have I complied with this requirement honestly?
- If the use of AI IS allowed in the assessment, have I responsibly followed all the conditions of the assessment and the principles of ethical use of AI tools?

In general, the preliminary experience of the teaching staff and students of universities in other countries and the UL shows that the awareness of the opportunities and risks created by AI is a topical matter for joint discussions and continuous learning between teaching staff and students, where the decisive element is the responsible decision-making and actions of each teaching staff and student in using AI in studies and personal growth.