GUIDELINES FOR THE USE OF ARTIFICIAL INTELLIGENCE AND GENERATIVE ARTIFICIAL INTELLIGENCE AT THE ISSBS

The Guidelines for the Use of Artificial Intelligence and Generative Artificial Intelligence at the ISSBS are a shorter and updated version of the *Guidelines for the Use of Generative Artificial Intelligence at the ISSBS*, which were prepared as part of the Faculty's development goals. The Guidelines are reviewed by the College of the Dean, the College of Advisors, the Heads of the Study Programmes and the Higher Education Teachers and Associates, and adopted by the Senate.

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Introduction and definition of AI and GenAI

At the ISSBS, we promote and advocate the transparent, safe and responsible use of digital technologies and artificial intelligence (hereafter AI) tools in education, research, continuous quality improvement and administration. At the same time, we are aware of the challenges that these tools bring to the functioning of the Faculty. The purpose of the guidelines is to help the stakeholders of the ISSBS to understand its potential and to manage the risks and limitations of its use in order to be able to use it in a qualitative, critical and ethical manner.

Today, we are increasingly facing tremendous advances in AI, so it is important that we work together to understand what the term means, how it works and what opportunities it opens up.

Artificial intelligence is a field of computer science concerned with developing systems that have the ability to perform tasks that normally require human intelligence. These tasks include abilities such as natural language understanding, learning from experience, interpreting and processing information, problem solving, prediction, decision making, reasoning, speech, face and object recognition, image processing and even creative creation. AI works by processing large amounts of data and looking for patterns in it. These patterns help algorithms learn to predict outcomes, make decisions or create new solutions (Kok et al., 2022).

Generative Artificial Intelligence (hereafter GenAI) is a branch of AI that focuses on creating new, original content, such as text, images, music or video, based on existing data. Rather than simply recognising patterns or analysing data, GenUI uses these patterns to create new outputs that are similar to the original, yet new and unique. It works by using large-scale language models to create texts that are coherent and meaningful, and that mimic the writing style presented to the model during the learning process.

Key highlights of the use of AI and GenAI at the ISSBS

The ISSBS is committed to the safe, critical, creative and ethical use of AI, based on:

Transparency: the use of artificial intelligence (AI) must be transparent, which means that the processes for integrating AI must be clear and understandable to all involved. At the ISSBS, we advocate the transparent use of AI, where all sources, tools and people who have contributed to the creation of content or the development of ideas are properly acknowledged.

Responsibilities: the IFSBS supports the responsible use of AI, which means that the responsibility for the results and consequences of the use of AI lies with the user. Responsible use of AI includes responsibility towards the environment and nature, social responsibility and responsibility towards all stakeholders who use the AI or its results. AI consumes a lot of energy and water to operate, which means that we are indirectly impacting the environment and nature through its use.

Ethical guidelines: the development and use of AI must follow high ethical standards, including respect for human rights, privacy, equality and non-discrimination. Ethical guidelines help prevent abuse and ensure that AI contributes to the well-being of the whole community. We draw on the *Guidelines for the Ethical Use of Generative Artificial Intelligence in Education and Research* (UNESCO, 2023), the *Ethical Guidelines for Trustworthy Artificial Intelligence* (UNESCO, 2019), and the *European Commission's Ethical Guidelines for the Use of Artificial Intelligence in Education (*European Commission, 2022).

Trainings*:* all stakeholders must be properly educated and trained in the safe and ethical use of AI. Only through good knowledge and competent use of these technologies we can reduce the risks associated with the use of AI and ensure positive and responsible outcomes. In this context, the ISSBS will organise training for staff and students.

Using AI and GenAI

Students

1. Students should have a good understanding of how AI and GenAI tools work before using them, so that they can use them safely and responsibly, otherwise extreme caution is required. AI and GenAI tools should not replace their own effort and critical thinking. Use is encouraged to complement learning and enhance the learning experience while maintaining high ethical and academic standards.

2. Students should always make sure that they follow the rules set by the Higher Education Teachers and Associates (HETA) for the teaching units. If the focus is on the process of creation, they should demonstrate their own creativity, critical thinking and independent content creation. GenAI tools can only be used as a supplementary tool or as an additional source of information, but not as the sole source of information for the production of the entire content. It should be noted that this applies to all source material, including work that has been directly extracted from GenAI tools. Text generated with GenAI should be marked up in the document so that it is clear where the generated text begins and ends, and referenced accordingly.

3. We would like to emphasize that the information obtained from GenAI tools is not always correct and accurate, it can be misleading, stereotyped, etc. As a consequence, it is essential to be transparent and responsible in the use of these tools and to always check the veracity of the information generated in order to avoid the use of false and fictitious information (so-called AI hallucination). The results generated by GenAI tools should be verified and weighed against relevant sources. At the same time, it is necessary to consider the potential risks of intellectual property infringement and to make sure that they do not infringe the rights of other authors.

4. Students take full responsibility for the use of the texts generated by the AI and GenAI tools. In case of suspicion that a text is the result of UI and GenAI that has not been properly credited, the HETA requires a defence of the work produced, additional references and further proof of authorship.

Higher Education Teachers and Associates (HETA) and mentors

1. HETA ensure that the use of AI and GenAI tools in the implementation of the study process is transparent and ethical.

2. In the unit planning process, clearly define and communicate to students the permitted or not permitted use of GenAI tools at the beginning of each course and define the conditions and criteria for GenAI use. At the same time, clearly state the permitted and not permitted uses of GenUI in the introductory presentation of the course in the ISSBS e-classroom.

3. Clear rules on how to use them allow students to understand how and in what way to use the AI and GenAI tools. Remind students about academic integrity in use, the shortcomings of the tools, ethical considerations and transparent use. For longer written products and term papers, define the amount of text that can be generated by the AI. Be clear about the assessment criteria, explain how they relate to the learning objectives and share successful examples of assignments.

4. For pedagogical purposes, the AI and GenAI are proving to be useful in particular to help with lesson planning and instructional design. The use of AI and GenAI for assessment and evaluation of learning outcomes is discouraged as they are high risk systems for the use of AI (EU Regulation, 2024). All student content created with AI and GenAI tools should be appropriately referenced.

5. Mentors should pay attention to the appropriate and transparent use of AI tools in longer written products, seminars, theses, bachelor's theses, master's theses and doctoral dissertations. At the same time,

the methodology section of the thesis should further justify in which parts of the research process AI and GenAI were used, which AI and GenAI tool was used and how it contributed to the improvement of the thesis.

Researchers

1. In research, the use of AI systems and tools enables the automation of analysis and research processes, increases the speed and efficiency of processing huge amounts of data and literature, improves the understanding of complex phenomena, and enables the search for solutions to complex problems.

2. Researchers use AI and GenAI transparently, critically and with an awareness of limitations. Accountability and academic integrity are key. Consistently respect copyright and intellectual property, data integrity and privacy.

Professional services and other staff

In the area of professional services, the use of AI and GenAI is particularly beneficial for optimising administrative processes. In the work of professional services, it is important to use only those inputs that are necessary for the performance of the tasks, without entering personal data or confidential information, and to critically evaluate the results obtained when using AI and GenAI. When AI tools are used to develop ideas or create content, they should be properly referenced.

Most common uses of AI and GenAI

AI and GenAI tools and systems are most commonly used for summarising text, brainstorming and searching for ideas (e.g. when planning activities), grammatical and linguistic editing of text, paraphrasing the source text, explaining a concept, translating, finding additional information, producing images and videos, graphical display of data, as a didactic tool, etc.

Inadequate use of AI and GenAI

Inappropriate use of AI and GenAI is:

- direct copying of text that has been substantially creatively generated by AI and GenAI, without giving a reference for its use;
- uncritical evaluation of results;
- use as the only source of information;
- not understanding the constraints or risks;
- where the use of artificially intelligent systems/tools/appliances is not allowed;
- irresponsible and unauthorised uploading of data, information and documents to AI and GenAI tools of a confidential nature (personal data, confidential documents, documents without appropriate permissions or copyrighted documents, etc.).

Citing UI and GenAI

Citing the text

Text generated with GenAI is marked up in the document so that it is clearly visible where the generated text starts and ends, similar to citations. This marking of the generated text can also be used later to determine the scope of the GenAI-generated text.

Placement of directly used text and bibliographic reference according to APA standard:

The generated response/text should be written as follows:

> *The question/request/invitation ["question/request/invitation citation"] has been answered by [name of tool/application]: ["answer citation"] (citing an APA-standard bibliographic reference).*

Example 1: To the question "Is the left-brain/right-brain split real or just a metaphor?" ChatGPT generated the answer that while the two brain hemispheres are somewhat specialised, "the notion that people can be labelled as left- or right-handed is considered an oversimplification and a popular myth" (OpenAI, 2024).

Example 2: When asked "Regarding the Pomodoro technique as a time management tool, are there any studies that have not reported positive results?", Bard produced the answer that while some studies have not found a positive correlation or significant benefit, he adds that "there are many other studies that have reported positive results from the Pomodoro technique" (Google, 2024; see Annex A for full extract).

Include the full text of the *GenAI long answers* in an annex to your work so that readers have access to the verbatim text that was generated. This is because the verbatim text needs to be documented, especially since the GenAI tools generate a unique response in each chat session, even if the same prompt is given (McAdoo, 2023).

Bibliographic description according to APA standard:

Author AI (year). Tool name (version) [Big Language Model]. Web link to the AI model used

Example 1: OpenAI. (2024). ChatGPT (version of 14 March) [Big Language Model]. https://chat.openai.com/chat

Example 2: Google. (2024). Bard (version of 18 May) [The Big Language Model] https://bard.google.com

General statement:

After each use of AI and GenAI, the use of AI or GenAI (e.g. linguistic editing of the text, grammatical appropriateness, comparison with your own literature research, explanation of the chosen concept, etc.) should be justified.

For all content created with AI or GenAI, the author usually adds an entry at the beginning:

> *During the preparation of this work/text/product/assignment, I have used the [TOOL/APPLICATION NAME] for [REASON]. After use, I have reviewed, edited, completed and corrected the generated result and I take full responsibility for the content of the resulting text/product/assignment.*

Citing images

Cite the source below the image

Example 1: "Little elephant talking to a boy on the moon" - image created with Bing Image Creator (https://www.bing.com/create on 9 April 2024). or

Example 2: This image was created with the Fotor AI Image Generator (https://www.fotor.com/features/ai-image-generator/ on 9 April 2024, prompt: "Little elephant talking to a boy on the moon").

General indication

The images in this material/text/assignment were created with Fotor AI Image Generator, https://www.fotor.com/features/ai-image-generator

Citing translations

In-text citation

"Verbatim translation of the text" (translation from DeepL Translate, 5. 9. 2024)

General citation

In this material/text/assignment I have used the translator DeepL Translate, https://www.deepl.com/en/translator

Sources and literature

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