Maastricht University

Policy for the Use of Generative Artificial Intelligence in Education at the Faculty of Psychology and Neuroscience

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1. General Remarks

With Generative Artificial Intelligence (GenAI) applications advancing at a rapid pace, they open up a wide range of opportunities to innovate education and research. The Faculty of Psychology and Neuroscience (FPN) must anticipate the effects these GenAI tools already have (and will continue to have) on both our teaching and research. Notably, users should be aware not only of the potential benefits and opportunities offered by GenAI but also of the associated risks, including legal considerations and potential drawbacks for learning processes.

This GenAI policy outlines FPN's stance on utilizing GenAI, especially Large Language Models (LLMs), in educational settings. It provides guidance for educators and students, preparing them for a future where GenAI plays a significant role in daily life. To facilitate this, an FPN Workgroup AI has been formed to assist educators (including programme directors, course coordinators, and teachers) in effectively implementing GenAI in education and assessments where appropriate. Educators can always contact the FPN Workgroup AI for assistance with questions on implementing GenAI in specific programmes, tracks, courses, or tutorials.

This policy is aligned with Maastricht University's Policy Framework for Generative Artificial Intelligence, released in December 2024 (click here to read), while catering specifically to FPN's context and needs. It focuses exclusively on the use of GenAI within education and does not cover research and operations policies.

The GenAI Policy is intended to be a living document, regularly updated to match the rapidly changing landscape of GenAI. If any updates influence student or staff interactions with GenAI, the FPN Workgroup AI will communicate these changes clearly to prevent any negative impacts on the community.

1.1. Objectives

This policy framework aims to:

- help prepare FPN staff and students for a future where GenAI increasingly influences psychology and neuroscience careers,
- clarify what is acceptable and unacceptable in utilizing GenAI in education,
- empower FPN staff and students to engage with GenAI ethically and responsibly while safeguarding the academic integrity and privacy of everyone involved,
- foster equal opportunities for all students, irrespective of their financial background or technological skills.
- encourage open dialogues between staff and students regarding the benefits and risks of GenAI in education, as well as the skillsets our students need in the AI era.

1.2. Definitions

GenAI refers to advanced AI models that can autonomously generate content by leveraging the data on which they were trained. Unlike traditional AI models, which primarily identify patterns and make predictions, GenAI can create entirely new content, including images, text, audio, code, and more. This innovative ability distinguishes GenAI as a tool not only for analysis but also for the creative production of diverse media.

1.3. Using GenAI in Education at FPN

Although this policy is intentionally broad and does not cover every potential question related to GenAI applications within our faculty, it serves as a foundation for further in-depth discussions on specific topics. FPN is committed to the ethical and responsible integration of GenAI into education, preparing both staff and students for a future where artificial intelligence plays an increasingly significant role.

Integrating GenAI into education at FPN marks a crucial point, bringing both unique opportunities and intricate challenges. GenAI has the potential to transform learning experiences by providing personalized and adaptive feedback, automating time-consuming tasks for educators, and enhancing student engagement through interactive and customized methods. Consequently, thoughtful integration of GenAI can develop vital AI literacy, preparing students with essential skills for a world increasingly influenced by GenAI.

Especially in education, LLMs have the potential to strengthen Problem-Based Learning (PBL) by supporting its core principles. To promote effective learning, educators can assess students' knowledge and comprehension through customized formative tests and provide instant, personalized feedback. To enhance contextual learning, GenAI can produce realistic, profession-oriented scenarios for students to investigate. During group work, GenAI can encourage collaborative learning by suggesting different viewpoints and possible solutions, prompting students to discuss, compare, and refine their ideas. Lastly, regarding self-directed learning, GenAI can serve as an intelligent tutor by answering individual queries, recommending targeted resources, and enabling students to track their progress through self-quizzes.

GenAI can also significantly support teachers' professional development. By giving educators quick access to the latest information, resources, and explanations about cutting-edge teaching methods, technologies, and materials, GenAI can help course coordinators and teachers stay informed and continuously improve their teaching.

However, using GenAI without careful consideration can lead to potential risks. These risks include, among others, biases present in GenAI-generated outputs, ethical, legal, and privacy concerns regarding sensitive research data and authorship in general, as well as the potential for misuse or overreliance on automated systems. Especially its tendency to "hallucinate" and the risk of bias highlight the vital need for human oversight and ethical evaluation of GenAI-generated content. In addition, the high computational demands of large-scale GenAI usage can have significant environmental impacts, requiring mindful utilization to reduce the carbon footprint. But also practical challenges, such as the substantial financial commitment needed for effective implementation and the necessity to address the digital divide, require meticulous strategic planning.

Furthermore, placing too much focus on integrating GenAI may jeopardize the quality of education. GenAI ought to enhance vital learning processes rather than replace them, thereby complementing essential elements of education, such as critical thinking (including evaluating GenAI outputs), interpersonal skills, and active learning experiences. Students should avoid becoming overly reliant on prompts or GenAI. This dependency can result in "cognitive atrophy" or "metacognitive laziness," where students delegate their thinking to GenAI, which undermines their ability for deep engagement with content and self-regulated learning. Education at FPN should continue to prioritize cultivating deeper cognitive processes instead of merely rewarding superficial results. While GenAI has the potential to assist in this endeavour, it also poses a risk to these goals. The fundamental constraints of GenAI, including its absence of nuanced

understanding, empathy, and creativity, indicate that it cannot completely substitute the human cognitive effort necessary for advanced thinking.

FPN is dedicated to implementing measures to mitigate these risks, such as providing ongoing training for staff and students and continuously evaluating GenAI-driven processes to maintain the highest standards of academic integrity and ethical research.

When employing any GenAI application, the emphasis remains on cultivating forward and critical thinking skills among staff and students, empowering them to use these advanced technologies within a sound ethical framework. Rather than banning the technology, we actively encourage its use in education processes wherever it is relevant.

Ultimately, GenAI should enhance deeper learning, rather than substitute essential human interaction and cognitive growth. By committing to continuous learning, adapting policies, and refining teaching practices in alignment with GenAI's fast-paced evolution, FPN can successfully navigate this intricate landscape and cultivate an educational setting that not only readies students for a future enriched by GenAI but also maintains the cherished values of intellectual rigor, critical inquiry, and academic integrity.

1.4. Responsible Use of GenAI

FPN requires that all GenAI usage comply rigorously with Maastricht University's Policy Framework for Generative Artificial Intelligence, released in December 2024 (click here to read), and with applicable laws and regulations (especially the EU-AI-Act). In instances where specific legal guidelines have yet to be established, we commit to upholding the principles underlying current legal frameworks, thereby ensuring a consistent ethical and legal approach.

Our dedication to the safe and responsible use of GenAI is evident in our focus on key ethical considerations. We are determined to uphold academic rigor and integrity, safeguard all members of our community from potential misuse, promote equal opportunities (see section 2.1.3.), and maintain accountability in data handling. Moreover, we prioritize comprehensive education and training for both staff and students to ensure that GenAI is applied both effectively and ethically. We advocate for ongoing exploration and experimentation with new GenAI applications, sharing best practices, and continuously monitoring their impact to drive sustained improvements.

1.5. Responsibilities of FPN

1.5.1. Training

FPN is committed to supporting all users, including staff and students, in the proper use of GenAI. The goal is to ensure that everyone understands the suitable applications of this technology while being aware of its limitations. A special emphasis will be placed on continuously improving AI literacy.

Staff will receive training on using GenAI for educational purposes during the University Teaching Qualification (UTQ) training, Continuing Professional Development (CPD) activities, and upon request. Additionally, online voluntary information modules covering the dos and don'ts of using GenAI in education will be provided. Separate voluntary online information modules will also be available to students, offering information tailored specifically to their needs. These student modules guarantee that all students at FPN receive consistent information about using GenAI in their education, establishing a shared foundation for

everyone. Furthermore, specific on-demand modules can be customized to address the particular needs of various programmes and tracks.

The FPN Workgroup AI will develop and offer these modules, trainings and workshops in collaboration with the Test Committee, EDLAB, and the UM Workgroup AI. This collaboration aims to ensure a cohesive approach that aligns with Maastricht University's central policies regarding GenAI usage. All course modules will be reviewed and updated as necessary at least once each academic year or more frequently if developments in GenAI warrant it.

1.5.2. Collaboration between stakeholders

FPN aims to promote transparent collaboration among all stakeholders involved in the use of GenAI in education. We will hold biannual meetings, organized and led by the chair of the FPN Workgroup AI, to identify and discuss potential issues, with additional meetings scheduled as needed.

Attendees will include:
- the Vice Dean Education,
- the Education Director,
- a representative from the FPN Workgroup AI,
- a representative from the Test Committee,
- a representative from the Board of Examiners for FPN and Brain Science,
- a staff representative from the Educational Programme Committees,
- a student representative from the Educational Programme Committees,
- a student representative from the Faculty Council,
- the Programme Directors,
- a representative from the Section on Teaching and Innovation in Learning (STIL),
- a representative from the research community,
- a representative from each research department (CN, CPS, NP&PP, and WSP),
- the coordinators for FPN Teaching Professionalization (UTQ and CPD),
- the FPN Policy Advisors for Education,
- the FPN Information Manager,
- a representative from the Education Office.

1.5.3. Information

The Faculty Board assigns the FPN Workgroup AI to manage and curate the FPN section on UMployee and Canvas, highlighting GenAI's role in education. These dedicated sections aim to inform colleagues about the latest developments in GenAI that are relevant to education. Especially the section on Canvas acts as a central hub for all GenAI-related information within our faculty, promoting discussions on the topic.

1.5.4. Providing up-to-date Guidelines

The FPN Workgroup AI oversees the annual review and necessary updates of the GenAI policy at FPN. This policy may be revised outside the standard annual schedule in exceptional and urgent situations. If required, the FPN Workgroup AI will lead and coordinate this exceptional review process, involving stakeholders as indicated in point 1.5.2.

2. Policy For Using GenAI in Education

2.1. General Remarks

2.1.1. Quality of education

FPN places great importance on educational quality. The integration of GenAI should reflect the four pillars of the overarching UM educational vision: problem-based learning, small-scale methodologies, global perspectives, and societal relevance.

2.1.2. Legal constraints

The issue of whether students can be forced to use GenAI tools against their wishes remains legally ambiguous. Students have various valid arguments to refuse consent for GenAI to utilize their work, including concerns about inadequate privacy protections, data security, and environmental impact. To minimize potential complaints from students, which could be time-consuming and resource-intensive to resolve, all courses must currently offer a genuine alternative that ensures no academic disadvantage for those opting out of GenAI. In simpler terms, not using these tools should not negatively affect students' grades, participation, or learning outcomes. Exceptions may apply if local GenAI is utilized, provided it operates offline or on a secure server owned or hosted by Maastricht University. Once laws adapt to the challenges posed by GenAI, this policy will also be appropriately modified.

2.1.3. Equal opportunity

Course coordinators incorporating GenAI tools into their courses should be aware that students do not all have equal access to these tools. Premium versions frequently yield better results, granting an academic edge to students who can afford them compared to those who cannot. While this issue might be beyond the course coordinators' influence, it is advisable to choose freely available versions over paid ones and to create assignments that usually yield satisfactory results using free versions. Although some paid versions of GenAI services may produce more advanced or specialized outputs, many widely available tools (such as ChatGPT, Gemini, Claude, and similar broad-purpose models) can still yield sufficiently high-quality results when prompted effectively. By choosing these freely accessible services (if in alignment with sections 2.1.2 and 2.3.1.3) or otherwise providing institutional access where possible, course coordinators can help that no student is disadvantaged due to financial constraints.

2.1.4. Drawbacks of GenAI usage

While GenAI tools offer significant potential, staff and students must be aware of the associated risks. The information these tools provide is often presented as fact; however, it may contain inaccuracies. Identifying instances of plagiarism involving text generated by GenAI is currently challenging. Moreover, GenAI tools can replicate and reinforce biases in their training data, including human errors. Also, these models require substantial computing power, leading to increased energy consumption with a potentially negative environmental impact.

2.1.5. Using GenAI at the intersection between research and education

Researchers are primarily responsible for ethically applying GenAI tools in their work, but they must also adhere to this FPN Policy regarding the use of GenAI in education, especially when

bridging research and education (for example, when overseeing Marble theses, Master's Theses, and Honors+ or Premium projects). If researchers supervising these projects are unsure about certain methods, they can reach out to the FPN Workgroup AI for assistance.

2.2. Policy for Students

2.2.1. Enhancing the learning experience

Students are allowed to use GenAI tools to enhance their learning experiences. These tools can promote critical thinking and problem-solving skills, as well as help in the practical application of newly acquired knowledge. Additionally, GenAI tools can support contextual learning by generating complex, real-world scenarios where students can apply theoretical concepts in practical situations.

2.2.2. Enhancing self-directed learning

GenAI tools can enhance self-directed learning by offering personalized study plans, providing access to additional resources (while respecting intellectual property rights), and delivering continuous feedback. This approach boosts students' autonomy and engagement, empowering them to take charge of their own educational journey.

2.2.3. Disclosing GenAI usage

If the use of GenAI is permitted as specified in the relevant Intended Learning Outcomes (ILOs) and/or course manuals, students must disclose its use in their academic work, which includes papers, presentations, reports, and exams. When revealing the use of GenAI, students need to provide the following details):

- the specific tools or models utilized for different sections,
- a clear account of the GenAI materials included in their work, along with the rationale for their inclusion,
- an indication of whether GenAI modified the student's original content and, if applicable, the modification method.

2.2.4. What students are permitted to do with GenAI

At FPN, students are typically allowed to use GenAI tools for the activities listed below, provided they maintain a critical perspective on any potential inaccuracies or shortcomings in AI-produced information. However, course coordinators can adjust these permissions for their specific courses and may restrict students from some or all of the activities listed below. This indicates that the course ILOs and instructions detailed in the course manuals are always paramount. Students should always be made aware that even when leveraging GenAI tools, they themselves remain responsible for the accuracy of the submitted work.

2.2.4.1. Retrieving information

Finding additional factual information and diverse viewpoints to assist in course preparation and group discussions.

2.2.4.2. Finding relevant sources

Identifying appropriate sources, whether academic or not, based on specific topics or keywords.

2.2.4.3. Summarising

Generating comprehensive summaries and recommending additional resources for further study.

2.2.4.4. Simplifying

Breaking down complex topics into more manageable concepts. This includes providing precise explanations and analogies that make abstract ideas more concrete and understandable. This should complement rather than replace intellectual engagement with a topic.

2.2.4.5. Changing perspectives

Considering diverse viewpoints and real-life applications to help students think critically about a topic and develop stronger arguments.

2.2.4.6. Enhancing brainstorming

Identifying additional or alternative areas of interest related to specific problems studied in a course.

2.2.4.7. Generating outlines or structures for written assignments (e.g., papers)

Assisting in the development of outlines and suggesting various lines of argumentation related to a specific topic.

2.2.4.8. Training critical thinking

Creating challenging questions and scenarios that encourage critical thinking, thereby increasing understanding of complex topics.

2.2.4.9. Enhancing (academic) language and writing skills

Improving academic writing and general language skills by providing tailored suggestions for grammar and style, appropriate for a specific audience. Additionally, tools can check for spelling errors. Students need to ensure that rephrased content accurately reflects the original information and does not omit or alter any content, while also preserving nuanced expressions and discipline-specific language.

2.2.4.10. Translating (academic) texts

Translating intricate texts to enhance understanding in a foreign language. Students must verify translations (e.g., through collaboration with fellow students instead of using another GenAI) to guarantee that the original meaning is conserved and discipline-specific terminology is accurately preserved.

2.2.4.11. Formatting academic writing and creating reference lists

Assisting in formatting text and references (both in-text and as reference lists) according to specific citation styles. Results should be double-checked for accuracy and completeness.

2.2.4.12. Simulating exam conditions

Using GenAI tools to create mock exams and practice questions that mimic real assessment conditions.

2.2.4.13. Supporting code and algorithm development, and debugging

Assisting in writing code, developing algorithms, and debugging, especially for beginners in programming. However, these tools should support, rather than replace, intellectual investment as students should fully understand the generated code.

2.2.4.14. Understanding complex data sets

Analysing and interpreting large datasets based on initial hypotheses or research questions in both quantitative and qualitative studies. Analyses generated by GenAI tools should always be critically evaluated. As before, these tools should support, rather than replace, intellectual investment as students should fully understand the generated analyses.

2.2.4.15. Creating multimedia content

Assisting in creating images, audio, or video to enhance presentations, visualize topics for discussions in tutorials, and facilitate understanding of course material through podcasts and other formats. Responsibility for checking for potential copyright violations rests with the student.

2.2.5. What students are not permitted to do with GenAI

2.2.6.1. Committing fraud

Presenting the output generated by GenAI as one's own work without adequately disclosing the use of GenAI.

2.2.6.2. Violating intellectual property (IP) rights

Uploading content that is protected by IP rights, such as academic articles behind paywalls or other login protections, to GenAI tools. This practice can lead to the generation of new material that infringes upon the copyrights and IP rights of the original authors.

2.2.6.3. Violating privacy and data protection regulations

Uploading confidential information to GenAI tools can pose significant risks to individuals and organizations.

2.2.6.4. Unlawfully using personal or private data

Violating personal or private data regulations, as all processing of personal and private data must comply with relevant laws and regulations. Violations can occur when personal or private data is improperly used or inadvertently obtained through GenAI applications.

2.2.6.5. Replacing their intellectual investment with easy GenAI solutions

Misusing the capabilities of GenAI tools to substitute genuine intellectual effort instead of enhancing it. Students should leverage GenAI to save time, increase productivity, and deepen their understanding of relevant topics. GenAI tools should support, rather than replace, this educational journey.

2.2.6.6. Disclosing identifying information

Revealing any terms that might identify any person or Maastricht University or the Faculty of Psychology and Neuroscience in prompts or files submitted to any GenAI. Avoid using any words that reveal the name of the university, faculty, or courses (e.g., UM, MU, FPN, etc.), even when not fully spelled out, as these names can be linked to the content and may be used as training data for AI-generated outputs in other contexts.

2.3. Policy for Programme Directors, Track Coordinators, Course Coordinators, Examiners, and Teachers

2.3.1. General Remarks

2.3.1.1. Developing education material

Educators are allowed to use GenAI to create and prepare their educational strategies and materials at the programme, track, course, and tutorial levels, provided they maintain a critical perspective on any potential inaccuracies or shortcomings in AI-produced information and respect all legal requirements.

2.3.1.2. Ensuring quality

Educators must ensure the quality of their work when using GenAI, while being aware of its limitations.

2.3.1.3. Privacy protection

GenAI should not be used with personal or organization-sensitive data unless there is transparency about how this data is processed and assurances that all applicable conditions for its use are met. Like section 2.2.6.6, this also applies to disclosing any terms that could identify Maastricht University or the Faculty of Psychology and Neuroscience in prompts. Avoid using any words that reveal the name of the university, faculty, or courses (e.g., UM, MU, FPN, etc.), even when not fully spelled out, as these names can be linked to the content and may be used as training data for AI-generated outputs in other contexts.

2.3.1.4. Equal opportunities

When GenAI is intended for use by students, educators aim to find solutions that ensure equal access to GenAI applications for all students and staff involved in their teaching. Students must have equal opportunities in terms of educational performance (see section 2.1.3.).

2.3.1.5. Assessing effectiveness

The responsible programme director or track/course coordinator routinely evaluates the effectiveness of GenAI within their programmes, tracks, courses, or individual tutorials. These evaluations consider the perspectives of both staff and students and can be conducted in methods tailored to the specific programme, track, or course, such as informal evaluations in tutorials, surveys, focus groups, or other suitable methodologies.

The concept of "effectiveness" requires a multifaceted approach that aligns with teaching methods and ILOs at both the programme and course levels. Generally, GenAI can be considered effective when it clearly assists and supports students in achieving the ILOs for their courses or programmes, enabling them not only to complete their assignments but also to acquire the required competencies and understanding.

2.3.2. Programme Directors, Track Coordinators, and Course Coordinators are required to:

2.3.2.1. Checking effects of GenAI on ILOs

Annually review the potential impact of GenAI capabilities on the course ILOs of the relevant programme or track. Check if ILOs effectively address skills like critical thinking, ethical reasoning, creativity, and adaptability, where human capabilities complement or exceed those of GenAI.

2.3.2.2. Ensuring the relevance of ILOs

Review the current course ILOs annually to ensure their relevance to the changing professional landscape, including updates in work processes that may make certain practices obsolete and necessitate effective collaboration with GenAI tools.

2.3.2.3. Adapting ILOs to new demands

If necessary, annually complement the current course ILOs on traditional academic skills with relevant ILOs on the development of skills related to GenAI with a special focus on AI literacy.

2.3.2.4. Monitoring the necessity to adapt ILOs at the programme (or track) level.

Monitor the potential impact of GenAI capabilities on the ILOs of the relevant programme (or track) for which you are responsible. Ensure that the ILOs effectively address the skills and knowledge necessary for students to remain competitive in their educational or professional pursuits after the programme. If urgent, programme ILOs may be revised exceptionally before the usual six-year cycle.

2.3.2.5. Course Coordinators are additionally required to:

Clearly communicate to students the allowed and forbidden uses of GenAI in their course, referencing the list under 2.2.4., adapted to their course.

2.3.3. Policy for Programme Directors, Track Coordinators, Course Coordinators, Examiners, and Teachers regarding the use of GenAI tools in assessments

2.3.3.1. Respecting the EU-AI-Act

The European Union (EU) classifies AI systems used for grading or evaluating summative assessments, as well as for selection and admission procedures, as 'high risk' under the current EU-AI-Act (click here to read). Maastricht University is currently investigating the conditions under which such tools might be utilized for grading summative assessments. FPN will not allow the exclusive use of GenAI for grading summative assessments until further notice. However, it does support using GenAI as an aid in grading, as long as the human element remains the key factor in determining the final grade, provided that section 2.3.1.3. is respected.

2.3.3.2. Formative Assessment

Using GenAI tools to develop training questions or quizzes and to provide formative feedback to students is permitted, provided the educator ensures data privacy and control for bias propagation. GenAI-integrated formative assessments should be designed to purposefully scaffold and promote cognitive effort instead of unintentionally diminishing it. The FPN Workgroup AI will offer tips to help educators create formative assessments.

2.3.3.3. Creating exam questions

Course coordinators and examiners can create exam questions and other assessment materials using GenAI tools. Questions developed with GenAI must be both valid and reliable. To maintain quality, especially in this scenario, the "4-eye principle" should be applied, which means that at least one additional educator must review these GenAI-generated exam questions.

2.3.3.4. Unproctored written examination

For unproctored written examinations, such as papers or reports, course coordinators and examiners should consider how Boards of Examiners can safeguard that students have genuinely met the ILOs. Course coordinators and examiners must adapt their course assessments to ensure that they evaluate the authentic work of students, which is particularly important given the potential undetectable use of GenAI.

For papers or reports, this could be achieved by shifting the focus from static written outputs to more dynamic processes and creative demonstrations of knowledge. For example, course coordinators could require students to provide evidence of their learning process or allow them to create videos, infographics, podcasts, or digital artifacts that showcase their understanding in innovative ways. These dynamic approaches can promote higher-order thinking skills, such as analysis, synthesis, and evaluation, while also reducing opportunities for academic dishonesty by focusing more on the learning process and originality (see section 2.3.3.7.).

If the responsible programme and course coordinators agree, final projects, such as theses, may additionally require an oral defense. The final assessment will then consider both the written content and the student's ability to defend their thesis against critical questions that evaluate their understanding of the topic.

2.3.3.5. Fraud and plagiarism

The BoEs, the EPC, and the Test Committee should continuously monitor and analyse the impact of GenAI on assessments, especially concerning fraud and plagiarism, suggesting implementing necessary measures as required.

2.3.3.6. Board of Examiners

The rules and guidelines set forth by the respective Board of Examiners must always be followed.

2.3.3.7. Support from Test Committee

Educators can always contact the Test Committee for support with questions about using GenAI to design formative or summative assessments (e.g., exams, quizzes, papers) and evaluate formative assessments with GenAI tools.