



Guide on the Use of Artificial Intelligence (AI) in Academic Activities

The present Guide on the use of Artificial Intelligence (AI) in academic activities (Guide) has been developed by the working group of the Academic Integrity League (AIL) with the aim of establishing clear and fair Norms and Principles regulating the application of AI in the context of all types of academic activities inherent to higher education institutions in Kazakhstan. This document brings together the efforts of three Schools (faculties) of Maqсут Narikbayev University – the International School of Economics (ISE), the School of Liberal Arts (SLA), and the Law School (LS), as well as international practices in the use of AI in education at the present moment.

The authors of the Document referred to various sources, including the Annual Report on the AI Index 2023 (Stanford University)¹, Principles for the Use of Generative AI Tools in Education (Russell Group)², Key Considerations for European Universities on "Artificial Intelligence Tools and Their Responsible Use in Higher Education Teaching and Learning" (European University Association)³, the report "Artificial Intelligence (AI) and the Future of Teaching and Learning: Findings and Recommendations" by the Office of Educational Technology, U.S. Department of Education⁴, and others.

Recommended for use by universities that are in the process of integrating Artificial Intelligence into their Educational and Research practices or seeking to enhance existing approaches while adhering to the principles of Academic Integrity and Ethical Standards.

The Guide is adopted and approved at the Meeting of the Council of the Academic Integrity League on 09 January, 2024, under Protocol No. 04.

¹ Nestor Maslej, Loredana Fattorini, Erik Brynjolfsson, John Etchemendy, Katrina Ligett, Terah Lyons, James Manyika, Helen Ngo, Juan Carlos Niebles, Vanessa Parli, Yoav Shoham, Russell Wald, Jack Clark, and Raymond Perrault, "The AI Index 2023 Annual Report," AI Index Steering Committee, Institute for Human-Centered AI, Stanford University, Stanford, CA, April 2023.

² Russell Group principles on the use of generative AI tools in education.

//https://russellgroup.ac.uk/media/6137/rg_ai_principles-final.pdf

³ Artificial intelligence tools and their responsible use in higher education learning and teaching. key considerations for European universities by European University Association (EUA)// https://eua.eu/downloads/publications/position_ai%20in%20it.pdf

⁴ U.S. Department of Education, Office of Educational Technology, Artificial Intelligence and Future of Teaching and Learning: Insights and Recommendations, Washington, DC, 2023. // <https://www2.ed.gov/documents/ai-report/ai-report.pdf>

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INTRODUCTION

The Academic Integrity League is a voluntary association of higher and post-secondary education organizations in the Republic of Kazakhstan. The league's mission is to enhance and improve the quality of education in the country by promoting and implementing ten fundamental principles of academic integrity⁵.

In the field of higher education, the advent of Artificial Intelligence (AI) presents unprecedented opportunities and significant risks. This Guide, based on the general principles of Academic Integrity and in accordance with the standards of the Academic Integrity League, aims to provide support and establish a comprehensive foundation for the responsible use of artificial intelligence in higher and post-secondary education organizations in the Republic of Kazakhstan.

The primary goal of this Guide is to ensure that all Higher Education Institutions in the Country benefit from AI while adhering to the highest standards of academic ethics and integrity. By establishing fundamental rules, this Guide aims to contribute to the creation of an environment where AI is used to enhance educational effectiveness, promote innovative research, and optimize administrative processes within the framework of ethical and responsible usage.

This mentioned Document serves as an essential regulatory framework for universities, providing a robust structure to navigate the complex aspects of AI usage in the academic environment. It takes into account needs of various stakeholders - students, faculty, researchers, and administrative staff, ensuring that the use of AI aligns with the core values of Academic Integrity, Transparency, and the pursuit of advancement. The dissemination of the Document is done by the League on a non-commercial basis, with the condition of proper attribution when used.

We urge an understanding that AI is not just a technological tool but a catalyst for the transformation of education. This Guide is a testament to our commitment to responsible engagement with these changes, providing the academic community of Kazakhstan the opportunity to stay at the forefront of innovation and integrity.

⁵ The Academic Integrity League website: <https://adaldyq.kz/about-the-league/>

Section 1: "Source and Tools Guidelines"

In the process of creating this Document, the following sources and tools were utilized:

- UNESCO's Guide on the Use of Generative AI in Education and Research⁶
- OECD Recommendations on Artificial Intelligence⁷
- Guiding Principles on Generative Artificial Intelligence by AAIN⁸
- Annual Report on the AI Index 2023 (Stanford University)⁹
- Principles for the Use of Generative AI Tools in Education by the Russell Group¹⁰
- Key Considerations for European Universities on 'Artificial Intelligence Tools and Their Responsible Use in Higher Education Teaching and Learning' by the European University Association¹¹
- Report 'Artificial Intelligence (AI) and the Future of Teaching and Learning: Findings and Recommendations' by the Office of Educational Technology, U.S. Department of Education¹²
- Ethical Principles for the Use of AI and Data in Education by the European Commission, Directorate-General for Education, Youth, Sport and Culture, Publications Office of the European Union, 2022¹³
- Draft Law on Artificial Intelligence (passed the first reading in the European Parliament on 14/06/2023) Artificial Intelligence Act 2021/0106(COD)¹⁴
- Ethical Principles for Trustworthy Artificial Intelligence by the European Commission, 2018¹⁵, and others.

For a generation of the image used as an illustration, the DALL-E service by OpenAI and the Adobe Firefly service by Adobe were used. The request author (prompt) was Sergey Pen, and its text was as follows: 'Photorealistic image depicting the symbiosis of a human and artificial intelligence, a hand touch, 16:9 aspect ratio.'

⁶ UNESCO Guidance for generative AI in education and research // <https://unesdoc.unesco.org/ark:/48223/pf0000386693>

⁷ Recommendation of the Council on Artificial Intelligence // <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449>

⁸ AAIN Generative Artificial Intelligence Guidelines. Australian Academic Integrity Network (AAIN) Generative AI Working Group, March 2023 // <https://www.teqsa.gov.au/sites/default/files/2023-04/aain-generative-ai-guidelines.pdf>

⁹ Nestor Maslej, Loredana Fattorini, Erik Brynjolfsson, John Etchemendy, Katrina Ligett, Terah Lyons, James Manyika, Helen Ngo, Juan Carlos Nieves, Vanessa Parli, Yoav Shoham, Russell Wald, Jack Clark, and Raymond Perrault, "The AI Index 2023 Annual Report," AI Index Steering Committee, Institute for Human-Centered AI, Stanford University, Stanford, CA, April 2023.

¹⁰ Russell Group principles on the use of generative AI tools in education. //

https://russellgroup.ac.uk/media/6137/rg_ai_principles-final.pdf

¹¹ Artificial intelligence tools and their responsible use in higher education learning and teaching. key considerations for European universities by European University Association (EUA). //

https://eua.eu/downloads/publications/position_ai%20in%20it.pdf

¹² U.S. Department of Education, Office of Educational Technology, Artificial Intelligence and Future of Teaching and Learning: Insights and Recommendations, Washington, DC, 2023. // <https://www2.ed.gov/documents/ai-report/ai-report.pdf>

¹³ European Commission, Directorate-General for Education, Youth, Sport and Culture, Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2766/153756>

¹⁴ [https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2021/0106\(COD\)&l=en](https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2021/0106(COD)&l=en)

¹⁵ Ethics Guidelines For Trustworthy AI - High-Level Expert Group on Artificial Intelligence - The AI HLEG is an independent expert group that was set up by the European Commission in June 2018. <https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>

Section 2 "Definitions and Terminology"

For the effective application of this Guide on the use of AI in Academic Activities, it is essential to clearly define the following key concepts:

Academic Activities – any educational or research activities subject to the rules of operation of higher education and/or post-secondary education institutions, research institutes (centers)/scientific organizations, or the rules of operation of any other organized group engaged in educational or research activities.

Artificial Intelligence (AI) – systems capable of modeling human cognitive processes through machine learning and algorithms.

Generative AI Models – algorithms that generate new content, such as texts, videos, audio, or images, based on training data.

Academic Integrity – a fundamental principle of ethical and honest behavior (excluding deception or intentional misleading, as well as complete or partial concealment of information) in educational and research activities. This principle specifically requires students, teachers, and researchers to adhere to high standards of academic integrity, including honesty in assessment, prohibition of plagiarism, proper acknowledgment of sources, as well as fairness and objectivity in the evaluation and review of academic work.

Academic integrity fosters trust in the academic community, ensures the credibility of scientific knowledge, and promotes a responsible approach to teaching and research.

Object of Assessment – a unit of information in any form, subject to evaluation by an authorized person assessing knowledge, skills, abilities, establishing the presence or absence of a certain fact or quality when such assessment is used in academic activities and recognized as valid, capable of generating certain legal consequences.

Hallucinated Data – incorrect or distorted data generated by AI that may be misleading or inaccurate.

Digital Literacy – skills and knowledge required for the effective and safe use of any digital technologies, including AI.

Data Confidentiality – protection of personal data and any private information that an individual (information owner) would wish to keep confidential or restrict access to from unauthorized access, use, or disclosure.

Guide – this Guide on the Use of Artificial Intelligence (AI) in Academic Activities.

Organization – a higher and/or postgraduate education institution, a research center (institute), or any other group engaged in educational or research activities.

Section 3 "General Principles of AI Use"

1. **The validity of use is conditional upon regulation** – AI technology is deemed an acceptable means to enhance the efficiency of teaching, research, and academic management. Any context of AI use requires regulatory rules due to the unpredictable and challenging potential of this technology. In the absence of regulations for certain aspects of AI use in academic activities, the respective Organization ensures their development and adoption or recognizes this Guide as a regulatory document with appropriate attribution references.

2. **Human-Centric Approach** – AI should serve to extend human capabilities rather than entirely replace them. This principle implies that AI can be used to enhance the efficiency of various tasks, but each case of such use or implementation in the practice of individual employees or departments must be based on a comprehensive assessment of the advantages of the human role in performing that function. Additionally, priority areas of Organization's use should primarily focus on those areas where AI helps bridge competency gaps, eliminate inequality in access to educational and research opportunities, rather than areas where the Organization may achieve economic efficiency by reducing jobs.

3. **Alignment with Mission, Goals, and Objectives** – The use of AI in each case must align with the Organization's mission, vision, values, goals, and objectives and cannot contradict them. Responsibility for verifying such alignment extends beyond the Organizational authorities and collegial bodies to individuals who initiate or apply AI in the context of their functional duties.

4. **Information and Engagement** – The Organization ensures a comprehensive set of measures to inform students, administrative staff, researchers, and faculty about AI capabilities, tools, and services based on AI technology, generative AI models, existing standards for personal data protection, and other human rights in this context. In case of identified knowledge or skill gaps in any participant in the potential AI application context, the Organization (and its representatives) is obligated to provide specific educational initiatives, and only after their completion, proceed to the implementation, application, or use stage.

5. **Competence Development** – The Organization ensures support for acquiring AI skills by all employees, learners, and other user categories, promoting understanding of its applications, possibilities, and limitations. This competency block is included in the list of mandatory training activities for both new hires and ongoing professional development for the Organization's employees (Continued Development Program).

6. **Ethical Use** – The Organization ensures and guarantees adherence to basic ethical principles (safety, accountability, non-discrimination)¹⁶ and principles of academic integrity in any AI usage context. This includes ensuring the prevention of bias or lack of comprehensiveness and objectivity in decision-making based on AI-generated data or through the delegation of such decision-making processes.

¹⁶ See more details in the "References and Tools" section

7. Confidentiality and Data Protection – The Organization ensures and guarantees compliance with the confidentiality and protection of personal data, both in accordance with the existing legislation of the Republic of Kazakhstan and beyond, addressing potential unregulated situations. The Organization is obligated to secure informed consent from involved parties, users, and learners regarding the use of any personal data for AI applications in education, research, or academic management.

8. Competence – The Organization ensures the presence of necessary competencies, including understanding ethical constraints and standards in AI usage, for any involved parties, and, if necessary, provides a pre-training course or another form of authorization for such usage.

9. Ecological Sustainability – The use of AI ensures the achievement of socially beneficial goals, the establishment of positive practices, and must not cause harm to individuals or communities. It should align with both individual and collective interests, and should not induce or be the cause of restricting anyone's rights.

10. Accountability and Responsibility – Any instances and cases of AI application are part of policies and procedures that involve their analysis and assessment for compliance with this Guidance. The Organization clearly defines responsibility for the outcomes of AI application and decisions made with the assistance of AI, including accountability for errors or unforeseen consequences.

Section 4 "Rules for the Use of AI in Academic Activities"

4.1. Delegation of Execution, Not Thinking¹⁷ – This rule signifies a fundamental approach to the application of AI in educational and research processes. It is based on the continuous analysis and evaluation of tasks solved with its assistance, considering the acceptability of its application for automating routine processes amenable to algorithmic processing (data processing, formatting, summarizing key units of information, paraphrasing, generating illustrative content, etc.). Simultaneously, it restricts or prohibits the use of AI for the development and assessment of higher-order thinking skills (forming judgments, developing positions, choosing strategies, etc.).

4.2. Accessibility of Tools – The Organization ensures conditions for using AI as an educational tool, guaranteeing equal access to its use by all participants in the educational process without the need to have or acquire additional resources for accessing the full functionality expected of them. The Organization also must consider technical limitations of provided services (user limits, simultaneous processing limitations, regional platform usage restrictions, language, and other requirements) to prevent situations where any learner is objectively deprived of access to the functionality used in the educational process.

4.3. Confirmed Relevance and Reliability – Every participant in the educational process is obligated to ensure that the AI technology or generative AI model used is suitable for tasks outlined in a course curriculum or assignment. It should provide results that meet requirements of accuracy, reliability, or relevance in the context of use¹⁸.

4.4. Awareness and Description of Conditions – Any context and conditions of the AI technology or generative AI model used in the educational process must be thoroughly described in the corresponding course policy (in the syllabus or academic policy). Conditions of use also include any requirements regarding references and mentions that the result or object of assessment was obtained through the use of AI.

4.5. Ensuring Methodological Diversity – Any participant in the educational process who acts as the author of assessment objects or methodological and instructional materials is obliged to consider potentially existing and reasonably accessible opportunities for learners to use AI and generative AI models. They must ensure a level of competence and methodological diversity in the use of tools and their formats to eliminate the simplification of tasks and the orientation towards assessment without the possibility of checking the independence of judgments or without the ability to review the process of obtaining the assessment object¹⁹.

¹⁷ "Outsource the doing not the thinking" - Dan Fitzpatrick, *The AI Educator // The AI Classroom: The Ultimate Guide to Artificial Intelligence in Education (The Hitchhiker's Guide for Educators Series)* Paperback – March 30, 2023 by Dan Fitzpatrick, Amanda Fox, Brad Weinstein.

¹⁸ For example, it is permissible when a content (result of usage) may contain knowingly distorted data, but the teacher specifically points out this circumstance, offering it as a learning task for students to independently identify inconsistencies and describe them. It is unacceptable when a teacher uses AI technologies without ensuring that the obtained data are not hallucinated and does not perform their preliminary verification or does not warn students about this.

¹⁹ For example, the authors of this Guide recommend limiting the format of "home-based" assignments in favor of assessment measures in the "in-class" or "real-time pressure" formats, as well as their combined use with an emphasis on assessing learners' ability to form independent judgments based on aggregated information.

4.6. Limits of Automation and Delegation – The Organization ensures the involvement of a person or a group of people with the appropriate competence in validating any automated and delegated decisions made using AI (proctoring, mass assessment, etc.) through an appeal procedure or another specially created procedure. Without adhering to this provision, no decisions with legal consequences for any participant in academic activities can be automated and delegated to AI.

4.7. Responsibility for the Results of Usage – Learners, as well as educators, bear personal responsibility for the outcomes of using AI in the educational process, including the obligation to familiarize themselves with the technical and technological limitations of this technology before usage. They must perform the necessary set of actions and their sequence to ensure the validity of the result, including fact-checking and the elimination of hallucinated data. Delegation of responsibility is not permitted.

4.8. Transparency of Usage – Any participant in the academic process must disclose the use of AI or generative AI models in teaching, learning, examinations, research, specifying specific attributes of the used service or platform that allow its identification among analogs and provide access to technical and other information about it. In addition to attributive information, it is also necessary to describe the context of usage, purposes, and objectives of usage (in the case of using a generative AI model, the text is specified(prompt)).

4.9. Usage in a Group Work – When AI is used by any member within the group to complete a group assignment or any form of group work, that individual must inform other participants about the usage, adhering to the rules of transparency in usage. In this case, the responsibility for the validity, relevance, and accuracy of the results of usage lies with the person who initiated and/or carried out such usage, unless there is another procedure specified by the assessment rules or other regulatory provisions of the Organization.

4.10. Usage in Academic Management – When AI is used for academic management tasks (educational data analytics, electronic assistance, analysis of personal and group parameters, etc.), the Organization ensures the possibility (option) of direct interaction between users and a human (an individual authorized by the Organization to perform functions and make decisions) in this context of interaction.

Disclaimer:

Organizations²⁰ are expected to reasonably use this Guide, supplement it independently, and adapt it to the context of its use.

Copyright:

To cite and reference this Guide, use the following format:

S. Pen, N. Makhanbayeva, et al., "Guide on the Use of Artificial Intelligence in Academic Activities" (Academic Integrity League, Astana, 2023).

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Reprinting and updates will be carried out as relevant practices of application and use accumulate.

²⁰ See Section 2 "Definitions and Terminology".