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**ISTANBUL OKAN
UNIVERSITY**

LEARNING APPLICATION AND
RESEARCH CENTER

Gen AI GUIDE

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Guide to the Use of Generative Artificial Intelligence (Gen AI) Tools

This guide has been prepared by the Learning Application and Research Center of Istanbul Okan University to provide guidance on the use of Generative Artificial Intelligence (Gen AI) tools utilized in educational technologies, containing information on the use of Gen AI tools in the digital learning domain.

Within the guide, there are definitions of Gen AI tools, possible usage scenarios, risks, and recommendations. It is designed to promote the ethical use of Gen AI tools and to enable users to employ these technologies in a conscious manner.

As part of the guide, general information and recommendations on how ChatGPT could be used in academic settings are provided as an example of Gen AI. Additionally, more specific guides and/or training materials can be created for functional usage scenarios and applications.

During the preparation of the guide, Dr. Merve Duysak, Assistant Professor at the Faculty of Law of Istanbul Okan University, contributed to the evaluation of Gen AI tools in the context of academic ethics and legal principles.

INTRODUCTION



In line with the "Quality Education" goal among the United Nations Sustainable Development Goals (17 Sustainable Development Goals by 2030), it is necessary to determine the contributions that artificial intelligence tools can provide in the field of education in accordance with the Global Education Agenda prepared (UNESCO - The Global Education 2030 Agenda). In this context, strategies need to be developed to appreciate human rights, gender equality, the culture of peace and non-violence, the development of global citizenship along with the contribution of cultural diversity and culture to sustainable development; ensuring equal access to quality technical education, vocational training, and higher education including universities; creating inclusive, gender-sensitive education opportunities that also encompass vulnerable groups and persons with disabilities. Universities play an important role in meeting the objective of significantly increasing the number of young people and adults with relevant skills, including technical and vocational skills directed towards dignified work and entrepreneurship, as an outcome of quality education.

Istanbul Okan University adopts a progressive and forward-thinking approach to integrating Gen AI tools into education with a focus on their beneficial and creative impact. The university aims to integrate these tools into creative learning/teaching methods and assessment practices, emphasizing a commitment to innovative and predictable approaches. While integrating new generation educational technology tools into learning designs, Istanbul Okan University maintains the fundamental principle that students must uphold academic integrity in all their academic endeavors. The use of Gen AI tools in all academic work is subject to the regulations outlined in the academic integrity policy.

DEFINITION

Gen AI is a subfield of artificial intelligence that can generate new data and/or content instead of just analyzing existing data. Data contents can include text, code, images, videos, and music files. Gen AI leverages extensive data libraries to generate responses based on specific queries and requests. It utilizes machine-learning algorithms, particularly deep neural network architectures, to provide supervised learning from large datasets and to generate new content. Some examples of Gen AI tools include ChatGPT, Bing, Bard, Dall-E, Perplexity.ai, Jasper, Midjourney, Amper, Dadabots, CodeStarter, Codex, Podcast.ai, Stability.ai, Adobe Firefly, Runway ML, Canva, SlidesAI, and SlidesGP.

Usage Scenarios for Utilizing Gen AI Tools in Education

Learning Assistance: Gen AI tools can be utilized to support comprehension of course-related topics by adapting to the learning style of individuals, similar to the assistant of the course. For example, improving students' writing skills or summarizing course materials.

Equal Access to Education: These tools can be used to ensure equal participation in education for students with special needs. For instance, providing audio narration of relevant texts for visually impaired students.

Idea Generation: Gen AI tools that provide instant and rapid feedback can be beneficial in creating creative projects and developing ideas. For example, supporting access to knowledge sets other than students native languages.

Programming Assistance: They can be used to correct errors in coding, develop algorithms, or generate new ideas while writing code. For example, translating code written in one programming language to another for a known program.

Gen AI Risks

01

Exploitation Risk: There is a risk that Gen AI tools may gain the trust of users and direct them towards specific information and sources, potentially leading to the infringement of freedom of expression and invasion of privacy.

02

Discrimination Risk: The possibility of discriminatory information in data sets can create the risk of biased outputs.

03

Legal Liability: The content generated by Gen AI tools may violate ethical rules, be harmful, or be illegal.

04

Disinformation: Gen AI tools may present information without verifying its accuracy, leading users to access unverified information. The content generated by Gen AI tools may contain incorrect information at the textual level and visually indistinguishable fake content.



Risk Reduction Recommendations

01

Verify: Gen AI tools should not be the sole source of information targeted for access. It is recommended to verify the information obtained from independent sources.

02

Understand Limits: The limitations of Gen AI tools in learning and content generation should be recognized, and it should not be forgotten that they are tools open to development.

03

Supervise: Outputs should be monitored considering that the generated content may violate laws, ethical rules, be misleading, and be far from reality.

04

Seek Support: It should be acknowledged that Gen AI tools are not exclusively designed for educational purposes and may produce outputs that are not suitable for educational methods; therefore, instructor support should be sought in their use.

05

Avoid Misuse: Care should be taken to ensure that the created content is used in accordance with copyright and personal data processing rules.

THE USE OF GEN AI IN HIGHER EDUCATION: AN EXAMPLE

Objective: To enhance student learning and support with advanced artificial intelligence. Generating creative texts. Assisting in communication with individuals with limited language skills.

Benefits: On-demand assistance, personalized learning, 24/7 accessibility. Natural language understanding and generation, virtual teaching assistantship. Creative expression and storytelling. In order for Gen AI to be effectively utilized in higher education, usage recommendations are provided under two different headings in the example below:

Usage Recommendations for Students:

Course Assistance and Guidance: Students can receive additional guidance on course content, topics, or assignments. Gen AI tools can provide information on the subject or guide to resolve uncertainties.

Research Assistance: Students can use these tools when searching for resources and ideas for research projects or studies. Gen AI tools can offer research suggestions on the subject and provide guidance on how to get started.

Note taking: Students can work more organized and effectively when writing notes or creating summaries in classes. Gen AI tools can provide ideas to facilitate the note-taking process.

Usage Recommendations for Academics:

Course Materials and Resources: Academics can use Gen AI to develop course content and assist students. Gen AI can be used to create course materials, provide suggestions, or enhance course resources.

Academic Counseling: Academics can use Gen AI when counseling students. They can use Gen AI to guide students on their academic needs or career plans.

Question and Answer Sessions: Academics can use Gen AI in question and answer sessions with students to increase student interaction.

STUDENT SUPPORT	LEARNING AND CURRICULUM DEVELOPMENT	CHANCELLERY	CAMPUS SERVICES
<p>Academic Queries</p> <ul style="list-style-type: none"> -Assisting in reinforcing course-related topics - Providing support to students in overcoming difficulties encountered in their assignments 	<p>Course Material</p> <ul style="list-style-type: none"> -Providing additional content and explanations 	<p>Data Analysis</p> <ul style="list-style-type: none"> -Analyzing student performance and other data -Providing feedback 	<p>Library</p> <ul style="list-style-type: none"> -Providing support in acquiring books, research articles, and study materials.
<p>Administrative Assistance</p> <ul style="list-style-type: none"> -Providing support with regulations, scholarships, and similar matters. 	<p>Feedback Mechanism</p> <ul style="list-style-type: none"> -Providing support in refining course materials. 	<p>Automatic Responses</p> <ul style="list-style-type: none"> -Quickly handling high volumes of routine queries. 	<p>Consultation</p> <ul style="list-style-type: none"> -Providing preliminary guidance before human supervision intervenes.
<p>Resource Finder</p> <ul style="list-style-type: none"> -Suggesting suitable textbooks, articles, or study materials to students. 	<p>Research Assistance</p> <ul style="list-style-type: none"> -Providing data or literature suggestions for research topics. 	<p>Research Assistance</p> <ul style="list-style-type: none"> -Offering data or literature recommendations for research topics. 	

Practice Tips

Personal Data Security:

Data controller is responsible for:

- a) Preventing the unlawful processing of personal data,
- b) Preventing unlawful access to personal data,
- c) Ensuring the security of personal data."

In this context:

1. Ensuring that all interactions comply with the General Data Protection Regulation (GDPR) and the Personal Data Protection Law (KVKK) and prioritizing data security.
2. Anonymizing students', academic, and administrative staff's personal data and queries when analyzing.
3. Taking necessary measures to preserve data and prevent its unauthorized use.
4. Preventing personal data from being accidentally or maliciously taken outside the institution.
5. Establishing a personal data storage and destruction policy.
6. Ensuring that employees receive training on issues such as not disclosing or sharing personal data unlawfully.
7. Developing a disciplinary process to be implemented if employees fail to comply with security policies and procedures.

Integration:

1. Integrating with existing Learning Management Systems (LMS) for seamless student access.
2. Providing mobile-friendly interfaces.

Continuous Learning:

1. Regularly updating the model with new information and course materials.
2. Monitoring for accuracy and relevance.

Addressing Concerns

Struggle With Addiction:

Remind students that artificial intelligence tools are complementary and do not alter human interaction.

Preventing the Spread of Misleading Information:

- Implement a feedback loop where students can report their findings for accuracy checks.
- Regularly review and refine the knowledge base.

Preserving Emotional Well-being:

-In scenarios where artificial intelligence can provide pre-counseling, always refer students to human professionals for predetermined serious issues.

Best Practice Recommendations

Transparency: Always inform users that they are interacting with a Gen AI tool. (Transparency obligation is not merely advisory but a legal requirement.)

User Education: Provide users with technical and legal workshops or training on how to best use the Gen AI tool.

Iterative Development: Plan continuous improvement activities based on feedback.

Collaboration: Collaborate with artificial intelligence experts, institutions, and educators for optimal implementation.

Translated by Elif Karaman 210602009 English Language Teaching Program
