## National Chengchi University Generative Artificial Intelligence Application Basic Principles

Version 3 (November 2023)

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These basic principles refer to the guidelines developed by major domestic and international universities facing generative artificial intelligence, providing normative and advisory principles for teachers in teaching applications, students in the learning process, and administrative colleagues in administrative operations. Generative AI is primarily used for creative tasks, such as generating new texts, images, music, audio, and videos to enhance productivity and efficiency. However, its authenticity needs to be verified by the user, who should also pay attention to ethical principles depending on the application and target, ensuring accuracy, avoiding infringement of intellectual property rights, and maintaining a responsible

and trustworthy attitude while using generative AI tools with autonomy in thinking and creativity. The following provides perspectives for teachers, students, and administrative colleagues in using generative artificial intelligence tools in both positive and negative aspects.

### I. What is Generative Artificial Intelligence? What are common generative AIs?

Generative AI produces content needed in work, learning, and life, focusing on generating new, original content, including text, images, sound, music, speech, presentations, and more. Below are some common generative AIs based on output content type:

1. Text Generation: Types of generative AIs that can learn from a vast amount of text data and produce new text similar to the original.

- ChatGPT: Automatically generates answers based on user input questions or dialogue.
- Bing Chat (ChatGPT): Microsoft's automated conversation generator, expanding voice support for voice inputs and improving non-English chat quality.
- Notion AI (ChatGPT): A comprehensive work collaboration tool supporting over 20 tasks, including copywriting, meeting notes, grammar correction, enhancing work efficiency.
- Bard (Google): Google's AI chatbot with automatic search and Google Workspace integration.
- LLaMA (Meta): Meta's (formerly Facebook) language model that can explain academic concepts, write Python programs, highlight texts, translate, etc.
- Elicit: Generates summaries after selecting the most relevant articles based on research questions.
- Genei.io: Summarizes thousands of words into accessible and understandable summaries.
- Introducing Whisper: AI for assisting in generating subtitles for course videos and post-editing.
- Gamma.app: Generates presentations or documents.

2. Image generation: Generative AIs that create new images similar to the original by learning from a large database of images.

- MidJourney: Generates images based on user descriptions.
- Stable Diffusion: Converts text to images, known for producing high-quality images, videos, and animations suitable for art, design, and image processing fields.
- Leonardo AI (Stable Diffusion): Features customizability, finetuning, color, and drawing styles.
- ALL·E (OpenAI): Generates realistic images from plain text descriptions, including both real and imaginary objects.
- Bing Create: Employs the DALL-E generation model with free image utilization, currently only supporting English.
- ChatGPT Paid Version: Combines DALL-E technology to offer a comprehensive text and image generation tool based on natural language instructions.

3. Music generation: Generative AIs that learn from a vast repository of musical pieces and generate new music.

- Riffusion: Automatically generates sounds based on textual descriptions provided by the user.
- Jukebox: OpenAI's music generation software which produces songs based on input settings like musical style and artist voice.
- Magenta Project: Google's generative AI project to assist users in creating music of various styles.
- Mubert: Generates music from text.

4. Voice generation: Generative AIs that learn from extensive voice data and produce new voices similar to the original.

• Lyrebird: Assists users in creating artificial voices similar to the original ones.

5. Design generation: Generative AIs that can learn from a vast dataset related to specific designs, generating potential designs based on user commands.

- Tome: Automatically generates presentation outlines, textual content, and images based on the given topic.
- VRoid Studio: A 3D character creator.

6. Video generation:

D-ID AI Video Generator: Automatically generates talking head videos.

# II. How Can Teachers Integrate Generative Artificial Intelligence in Research and Teaching?

Facing the introduction of generative AI tools into the educational field, teachers can consider incorporating generative AI tools into their teaching designs during course planning each semester. Given the ethical ambiguity surrounding generative AI in

academia, specific regulations for its use within individual courses should be clarified in the course syllabus. Additionally, teachers should consider using these tools to increase efficiency in research planning and output while being cautious not to provide confidential, personal, or unauthorized information to generative AI. The following principles are provided for consideration:

Positive Application Aspects	Risk Prevention Aspects	
<ol> <li>Preparation for Courses         <ul> <li>Utilizing generative AI to help produce and revise the syllabus, with a clear explanation of the role of generative AI tools in teaching within the syllabus.</li> <li>Discussing ethical issues related to the use of generative AI in class, such as indicating the AI tools used and their scope, while fostering a sense of responsibility among users.</li> <li>Employing various generative AI tools as aids in producing and revising instructional materials, with a clear delineation of the role of these tools in teaching.</li> </ul> </li> </ol>	<ul> <li>Research reports and published papers assisted by generative AI tools should include a relevant disclaimer at the end.</li> <li>Teachers (authors) using generative AI for writing need to understand the concept of responsibility, ensuring the accuracy of generated content, and avoiding intellectual property infringement or plagiarism. Data collection and source citation should refer to formal sources, such as books or journals, rather than relying solely on online resources. The effectiveness of detection websites (e.g., GPTZero) is still uncertain, so they are resources and for arfs.</li> </ul>	
<ul> <li>2. Teaching Application <ul> <li>Integrating generated content or outputs with creative and diverse teaching methods to enhance students' critical analysis and reflection abilities.</li> </ul> </li> <li>3. Teaching Empowerment <ul> <li>Encouraging classroom assistants to participate in workshops or training organized by the Teaching Development Center or other internal and external entities to learn about the application techniques of generative tools, relevant.</li> </ul> </li> </ul>	<ul> <li>they are recommended for reference only.</li> <li>If assessments may use or have the opportunity to use generative AI, assessments should aim to evaluate higher-level cognitive skills as much as possible, favoring practical assessments or action-oriented evaluations over those that participants could complete solely by utilizing generative AI.</li> <li>To prevent scoring disputes due to inconsistent attitudes towards the use of generative AI tools among</li> </ul>	
<ul> <li>generative tools, relevant regulations, and their risk limitations.</li> <li>4. Research Projects <ul> <li>Teachers can use generative AI to generate creative research topics or assist in preliminary literature reviews, even generating research summaries to improve research efficiency, while clearly stating the role of generative AI tools in research.</li> </ul></li></ul>	of generative AI tools among teachers and students, teachers should clearly state the regulations for using generative AI tools in the course syllabus. Four options for consideration include: 1. Completely open usage 2. Conditionally open usage (with specified regulations) 3. Prohibited usage (with specified management mechanisms)	

4. The course does not involve

	the use of AI Detailed writing methods can be found in the reference materials below.
Reference Materials	

Course Syllabus - Generative AI Usage Rules:

• National Tsing Hua University Ethical Statement on Generative Artificial Intelligence <u>https://curricul.site.nthu.edu.tw/p/404-1208-248357.php?Lang=zh-tw</u>

Worldwide University Guidelines:

- Princeton University <u>https://mcgraw.princeton.edu/guidance-aichatgpt</u>
   MIT
- https://mitadmissions.org/blogs/entry/mit-writing-faculty-commenton-gpt-andother-ai-assisted-writing/
- The University of Chicago <u>https://academictech.uchicago.edu/2023/01/23/combating-academic-dishonesty-part-6-chatgpt-ai-andacademic-integrity/</u>
- Stanford University <u>https://tlhub.stanford.edu/docs/teaching-in-the-aiera/</u>
- University College of London <u>https://www.ucl.ac.uk/students/exams-andassessments/assessment-success-guide/engaging-ai-your-education-andassessment</u>
- National Cheng Kung University AI and Related Learning Tools Reference Guide <u>https://sites.google.com/gs.ncku.edu.tw/nckuaiguidance/%E9%A6%96%E9%A0%</u> 81
- National Tsing Hua University Guidance on AI Collaboration, Co-learning, and Literacy Cultivation in the Educational Field <u>https://www.nthu.edu.tw/pdf/pdf\_168292719796.pdf</u>

Q&A Contact window: Center for Teacghing and Learning development, Office of Academic Affairs Extension: 62175 Email: moodle @nccu.edu.tw

## **III. How Students Should Use Generative Artificial Intelligence forLearning?**

Students using generative AI tools should adhere to the principles of academic integrity, avoid plagiarism and cheating, and comply with the course instructor's regulations. Within the scope specified in the course syllabus, students are advised to consider the following principles when completing learning assignments and producing outcomes:

Positive Application Aspects	Risk Prevention Aspects	
<ol> <li>Course Learning         <ul> <li>Summarizing Key Points: Generative AI tools can be used to analyze article content and organize key information and summaries.</li> <li>Inspiring Creativity: Generative AI tools can offer diverse perspectives and content to stimulate creative</li> </ul> </li> </ol>	<ul> <li>Strictly adhere to the academic integrity requirements mentioned in the classroom or syllabus, and strictly follow the course regulations.</li> <li>Under the guidelines defined by the course instructor and within the framework of academic ethics, generative AI tools can be</li> </ul>	

#### insights.

- 2. Homework Reports and Papers
  - Report Structure: Instructions based on homework, reports, or thesis topics can be inputted into generative AI tools to initially produce a content structure, which should then be reviewed and corrected for appropriateness and accuracy.
  - Content Rewriting: Initial drafts can be modified and expanded with the help of generative AI, but the content must be rewritten to adjust the content appropriately and ensure rhetorical accuracy, thus guaranteeing the quality of the report.
- 3. Enhancing Application Skills
  - Participation in workshops or training organized by the Center for Teaching and Learning Development or other domestic and international entities can help understand the application, regulations, and limitations of generative tools. As generative AI tools are still in the early stages, students are encouraged to always maintain a critical and reflective attitude to master the tools without being dominated by them.

appropriately used to improve learning efficiency and effectiveness, and to complete the learning outcomes for each course.

- Understand the advantages and risks of using generative AI tools as well as intellectual property issues. For example, content generated might contain errors or significant biases, or may incorporate others' intellectual property rights. Users need to critically examine, carefully check, validate, and revise the output content and rhetoric, and properly mark intellectual property rights.
- When producing reports using generative tools, sources must be accurately cited in accordance with academic ethical standards.
- Avoid using generative tools that involve personal privacy data or use biased or discriminatory language and content.

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## IV. How Administrative Colleagues in Departments and Offices Can Assist With Business Using Generative Artificial Intelligence

Administrative colleagues in the university employing generative AI tools should avoid using them as tools for cognitive attacks or spreading false information. In reliable and safe use scenarios, generative tools can be effectively used to complete various administrative tasks within the university.

Positive Application Aspects	Risk Prevention Aspects	
<ol> <li>Commonly Asked Questions and</li></ol>	<ol> <li>Issues of appropriateness</li> <li>Content generated is mainly through</li></ol>	
Responses <li>Generative AI can assist in</li>	AI learning from a vast amount of	
responding to common queries.	data and then reorganizing it to	

<ol> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	<ul> <li>Meeting Transcripts and Records</li> <li>For meetings that can be publicly disclosed, AI can assist in producing meeting minutes.</li> <li>School News Writing</li> <li>Generative AI can assist in writing press releases or social media content.</li> <li>ocument Translation</li> <li>Generative AI can aid in language translation, accelerating the bilingual environment of educational administrations.</li> <li>Ian Planning</li> <li>Enter the text chapter and expected output, and generative AI will produce a draft, which administrative personnel can then</li> </ul>	<ul> <li>produce the content. The correctness of such content is not easy to verify, and it may contain inappropriate rhetoric. Such content should not be directly used as the basis for decision-making, services, or formal documents to avoid potential errors or defects. Users must professionally judge the generated content and its risks and take responsibility.</li> <li>2. Disclosure issues <ul> <li>Clearly disclose in the documentation related to public affairs the parts produced using generative artificial intelligence.</li> </ul> </li> <li>3. Confidential documents should be written by the business handler procession.</li> </ul>	
		<ul> <li>tools.</li> <li>Confidential business content, personal privacy information, and information not authorized for public disclosure by the unit should not be provided to generative AI tools, nor should questions that may involve confidential business or personal data be asked of generative AI.</li> <li>Cognitive attack issues</li> <li>When using content produced by generative AI tools, it is necessary to be especially cautious in verification and be mindful of ideological messages that may be included.</li> </ul>	

Q&A contact window: Secretariat Group 1 Extension: 62031 Email: fc@nccu.edu.tw

Applicable Targets Utilization	Teacher Teaching	Student Learning	Administrative Business
Methods			
Positive	1. Preparation for Courses	1. Course Learning	1. Commonly Asked Questions and
Application	■ Utilizing generative AI to help	<ul> <li>Summarizing Key Points:</li> </ul>	Responses
Aspects	produce and revise the	Generative AI tools can be used	<ul> <li>Generative AI can assist in</li> </ul>
	syllabus, with a clear	to analyze article content and	responding to common queries.
	explanation of the role of	organize key information and	2. Meeting Transcripts and Records
	generative AI tools in teaching	summaries.	• For meetings that can be publicly
	within the syllabus.	<ul> <li>Inspiring Creativity: Generative</li> </ul>	disclosed, AI can assist in
	<ul> <li>Discussing ethical issues</li> </ul>	AI tools can offer diverse	producing meeting minutes.
	related to the use of generative	perspectives and content to	3. School News Writing
	AI in class, such as indicating	stimulate creative insights.	<ul> <li>Generative AI can assist in</li> </ul>
	the AI tools used and their	2. Homework Reports and Papers	writing press releases or social
	scope, while fostering a sense	<ul> <li>Report Structure: Instructions</li> </ul>	media content.
	of responsibility among users.	based on homework, reports, or	4. Document Translation
	<ul> <li>Employing various generative</li> </ul>	thesis topics can be inputted into	<ul> <li>Generative AI can aid in</li> </ul>
	AI tools as aids in producing	generative AI tools to initially	language translation,
	and revising instructional	produce a content structure,	accelerating the bilingual

mater	ials, with a clear
deline	eation of the role of these
tools	in teaching.

- 2. Teaching Application
  - Integrating generated content or outputs with creative and diverse teaching methods to enhance students' critical analysis and reflection abilities.
- 3. Teaching Empowerment
  - Encouraging classroom assistants to participate in workshops or training organized by the Teaching Development Center or other internal and external entities to learn about the application techniques of generative tools, relevant regulations, and their risk limitations.
- 4. Research Projects
  - Teachers can use generative AI

which should then be reviewed and corrected for appropriateness and accuracy.

- Content Rewriting: Initial drafts

   can be modified and expanded
   with the help of generative AI,
   but the content must be rewritten
   to adjust the content
   appropriately and ensure
   rhetorical accuracy, thus
   guaranteeing the quality of the
   report.
- 3. Enhancing Application Skills
  - Participation in workshops or training organized by the Center for Teaching and Learning Development or other domestic and international entities can help understand the application, regulations, and limitations of generative tools. As generative AI tools are still in the early

environment of educational administrations.

- 5. Plan Planning
  - Enter the text chapter and expected output, and generative AI will produce a draft, which administrative personnel can then professionally amend.

	to generate creative research topics or assist in preliminary literature reviews, even generating research summaries to improve research efficiency, while clearly stating the role of generative AI tools in research.	stages, students are encouraged to always maintain a critical and reflective attitude to master the tools without being dominated by them.	
Risk Prevention Aspects	<ul> <li>Research reports and published papers assisted by generative AI tools should include a relevant disclaimer at the end.</li> <li>Teachers (authors) using generative AI for writing need to understand the concept of responsibility, ensuring the accuracy of generated content, and avoiding intellectual property infringement or plagiarism. Data collection and source citation should refer to formal sources, such as books</li> </ul>	<ul> <li>Strictly adhere to the academic integrity requirements mentioned in the classroom or syllabus, and strictly follow the course regulations.</li> <li>Under the guidelines defined by the course instructor and within the framework of academic ethics, generative AI tools can be appropriately used to improve learning efficiency and effectiveness, and to complete the learning outcomes for each course.</li> </ul>	<ul> <li>1. Issues of appropriateness</li> <li>Content generated is mainly through AI learning from a vast amount of data and then reorganizing it to produce the content. The correctness of such content is not easy to verify, and it may contain inappropriate rhetoric. Such content should not be directly used as the basis for decision-making, services, or formal documents to avoid potential errors or defects. Users must professionally judge the</li> </ul>

or journals, rather than relying solely on online resources. The effectiveness of detection websites (e.g., GPTZero) is still uncertain, so they are recommended for reference only.

- If assesses may use or have the opportunity to use generative AI, assessments should aim to evaluate higher-level cognitive skills as much as possible, favoring practical assessments or action-oriented evaluations over those that participants could complete solely by utilizing generative AI.
- To prevent scoring disputes due to inconsistent attitudes towards the use of generative AI tools among teachers and students, teachers should

- Understand the advantages and risks of using generative AI tools as well as intellectual property issues. For example, content generated might contain errors or significant biases, or may incorporate others' intellectual property rights. Users need to critically examine, carefully check, validate, and revise the output content and rhetoric, and properly mark intellectual property rights.
- When producing reports using generative tools, sources must be accurately cited in accordance with academic ethical standards.
- Avoid using generative tools that involve personal privacy data or use biased or discriminatory language and content.

generated content and its risks and take responsibility.

- 2. Disclosure issues
  - Clearly disclose in the documentation related to public affairs the parts produced using generative artificial intelligence.
- 3. Confidentiality and privacy issues
  - Confidential documents should be written by the business handler personally and not generated using tools.
  - Confidential business content, personal privacy information, and information not authorized for public disclosure by the unit should not be provided to generative AI tools, nor should questions that may involve confidential business or personal data be asked of generative AI.
- 4. Cognitive attack issues

clearly state the regulations for	<ul> <li>When using content produced by</li> </ul>
clearly state the regulations for	■ when using content produced by
using generative AI tools in the	generative AI tools, it is
course syllabus. Four options	necessary to be especially
for consideration include:	cautious in verification and be
1. Completely open usage	mindful of ideological messages
2. Conditionally open usage	that may be included.
(with specified regulations)	
3. Prohibited usage (with	
specified management	
mechanisms)	
4. The course does not	
involve the use of AI	
Detailed writing methods can	
be found in the reference	
materials below.	