Statement on the Principles and Application of Generative AI in Education by National Yang Ming Chiao Tung University

The development and application of artificial intelligence (AI) technology are future trends. As one of the leading research universities, National Yang Ming Chiao Tung University (hereinafter referred to as NYCU) possesses strengths in interdisciplinary research and development in various fields such as electrical machinery, information technology, biomedicine, and more. We encourage our teachers and students to actively engage in forward-thinking research and technological advancements. However, it is essential to remind both teachers and students to remain mindful of relevant ethical and legal considerations. Consequently, we present the following principles and recommendations regarding the impact of generative AI tools, such as ChatGPT, on university teaching and learning.

1. NYCU's stance on generative AI

(1) Embrace an open and inclusive attitude towards emerging technologies

Each department at the university may offer courses related to artificial intelligence or encourages teachers and students to engage in research on related topics. This enables them to stay informed about the development trends of emerging technologies, effectively utilize these technologies to enhance teaching and learning, and deepen their expertise in their respective fields.

(2) Prioritize privacy and information security

When utilizing generative AI for teaching or learning purposes, teachers and students should be mindful of personal privacy and information security. It is important to avoid inputting personal or others' private information into generative AI models to minimize the risk of data leakage.

(3) Comply with relevant laws and regulations

It should be noted that current generative AI technology does not clearly indicate the sources of information and cannot guarantee the accuracy of the generated content. Therefore, directly using the generated content as one's own academic work may infringe upon Copyright Act and the academic ethics–related standards. Considering the significance of research integrity and academic ethics, NYCU emphasizes the need for teachers and students to uphold academic ethics and comply with applicable laws and regulations.

2. How teachers in NYCU respond to the impact of generative AI on teaching

(1) Understand the nature and application of generative AI

Generative AI is a technology that utilizes various techniques, including big data and machine learning. However, like any other technology, it has limitations. For instance, the data in the database may not always be up to date or may contain inaccurate information. Consequently, it is important to educate students on evaluating the

information provided by generative AI. They should approach the messages with skepticism and carefully consider whether the information provided is the most recent and accurate answer.

(2) Design classroom activities that incorporate generative AI and make effective use of it to enhance teaching

Teachers enhance the depth and breadth of learning activities within the course, guiding students to apply and experience artificial intelligence technology while helping them understand its advantages and limitations. Additionally, teachers can utilize generative AI as a tool for debugging and editing, such as employing it to revise students' English grammar or academic writing.

(3) Foster students' robust professional knowledge and provide timely instruction on the proper utilization of emerging technologies, thereby cultivating their information literacy skills

Students may view generative AI (such as ChatGPT) as a learning tool, partner, or resource. As AI-generated content may lack logical or factual coherence and cannot indicate its source, teachers should instruct students to ask appropriate questions and use correct keywords when utilizing generative AI. This cultivates students' ability to question, verify the authenticity of information, and engage in logical reasoning.

(4) Design multiple evaluation methods to ensure learning effectiveness and fairness

Teachers are advised to incorporate the level of acceptability of human-computer cooperation in the evaluation criteria prior to teaching. Furthermore, they should clearly explain the rules of use to students or engage in discussions to reach a consensus. Multiple evaluation of students' learning outcomes can include written assignments, reports, oral examinations, presentations, group discussions, practical work, and internships. Additionally, teachers may assign in-class writing tasks to prevent students from relying on generative AI to complete homework and to address concerns about assessment fairness.

(5) Teach correct academic writing norms and formats, emphasize the importance of originality in assignments and theses. Advisors should take responsibility for guiding students in writing assignments and theses

While generative AI excels in integrating existing knowledge, its contribution to academic innovation is still limited. It is difficult to determine if a paper has been written using generative AI technology with current capabilities. Therefore, teachers should teach students to adhere to academic ethics, academic writing norms, and formats. Students should understand that authors need to take full responsibility for the presentation of academic works. Teachers can increase the frequency of research meetings, maintain good teacher-student interaction, monitor students' learning levels and research progress, and ensure the quality of papers. For instance, students should correctly quote, paraphrase, and attribute sources, providing necessary source of information. If the text reflects students' own understanding, discussion, opinion, or originality, it should be clearly stated to discern whether students have directly used generative AI's or others' works in their academic papers.

3. Concluding Remarks

NYCU firmly believes in the importance of higher education in fostering students' critical thinking, problem-solving, communication, cooperation, and interdisciplinary learning skills. It is the responsibility of university teachers to stimulate students' motivation to learn and effectively utilize supplementary learning tools to foster students' willingness and enthusiasm for learning. Additionally, teachers should cultivate a lifelong learning mindset among students to fully realize the value of higher education.

With the emergence of new technologies like generative AI and other forms of artificial intelligence, it is crucial to incorporate these technologies into teaching and research while adhering to academic self-discipline norms. It is important to continuously monitor and reflect upon the application of these technologies to enhance the effectiveness of teaching and academic research.