

How to Utilize AI for Cross-Domain Teaching: Experiences Shared by Chui-Kuei Tseng and Chih-Yung Chang

Center for Teacher Professional Development held a "Cross-Domain Teaching Dialogue" on April 13th at 12:00 p.m. in I501, inviting Professor Chui-Kuei Tseng from the Department of Japanese and Professor Chih-Yung Chang from the Department of Computer Science and Information Engineering to share their future prospects on foreign language and AI cross-domain teaching. A total of 62 teachers participated in the event.

Dr. Chui-Kuei Tseng explained that in recent years, AI technologies have significantly impacted the field of foreign languages, such as simulation of human voices for unfamiliar languages, interpretation machines, translation software, and ChatGPT. When she served as the department chair, she faced challenges in student recruitment and concerns from parents, which led her to ponder the question, "Will my students be replaced after four years of college education by AI?" Associate Professor Shun-Jie Ji from the Department of Future Studies said, "You won't be replaced by AI, only by those who understand AI one day earlier." Professor Chih-Yung Chang from the Department of Computer Science and Information Engineering, as well as Chief Information Officer Chin-Hwa Kuo, added, "With expertise and technological knowledge, the road ahead will be broader." These 3 teachers' insights provide answers to this question.

Dr. Tseng pointed out that listening, speaking, reading, writing, and expressing, as well as integrating political, economic, social, and cultural aspects, are the basic and intermediate foreign language skills that can be replaced by current AI technology. However, the irreplaceable value of linguistics is "accessible real-time communication." In order to cultivate students' competitiveness, she emphasized that "foreign language expertise, country-specific research, AI skills, and leadership style" are all indispensable. She cited Japanese translation classes as an example, where students work in groups using various translation software to compare translation results and generate the best version. She provides

guidance and suggestions during the presentation to enhance students' appreciation and discernment abilities. Through such operational exercises, students can better understand the strengths and weaknesses of different translation software in practical application.

Dr. Chih-Yung Chang gave a presentation titled "Cross-domain Demands and Opportunities from the Perspective of AI". He first used ChatGPT as an example, which is knowledgeable in various subjects and can perform tasks such as writing papers, novel scripts, marketing copy, coding, and error debugging. People only need to provide instructions in the form of text, voice, images, videos, gestures, or actions, and it can understand and generate results. It can also interact with humans like a real person. He pointed out, "With such a capable assistant, why not make use of it?" For students, if ChatGPT is used as a classmate, teaching assistant, teacher, or advisor, it can help with individual curriculum learning and career planning, allowing AI to quickly bridge the gap between questions and answers. For teachers, using ChatGPT can enhance the quality of teaching, from designing curriculum, assisting with lesson preparation, providing classroom assistance, evaluating assignments, to supporting learning, filling in blind spots and gaps, and making knowledge transfer more practical, comprehensive, and interesting.

Dr. Chang took examples from abacus, calculator, computer to mobile phones, and from horse carriages, cars to self-driving cars. In the past, the development of technology has never been rejected by humans. Even though new technologies may replace a few people, the convenience it brings will benefit more people. Furthermore, it is pointed out that in the future, 65% of students will engage in jobs that have never appeared in human history before. Students entering the job market will face such threats and demands. As teachers, we cannot ignore "interdisciplinary new technologies." It encourages teachers to step out of their comfort zones, adapt to changes in the world, cultivate AI literacy in themselves, and integrate "new technologies across disciplines" into the curriculum, in line with students' conditions, needs, and resources, to create a rich and diverse teaching environment.

