

THE CHINESE UNIVERSITY OF HONG KONG

**Funding Scheme for Initiatives on United Nations Sustainable Development Goals
supported by the Teaching Development and Language Enhancement Grant for 2022-25**

Project Title: Building a Sustainable World Together: Global Dialogues for Nature Conservation and Education

Principal Supervisor(s) and Unit(s):

Dr. WAN Wai Yan Sally, Department of Curriculum and Instruction

Project Objectives

1. To build students' capacity in conducting global dialogues by providing opportunities to interact with individuals from different cultural backgrounds;
2. To empower students as global citizens by equipping them with intercultural communicative competences;
3. To initiate dialogues that involve participants from diverse cultural backgrounds; and
4. To build a Global Community of Practice (CoP) by connecting with stakeholders from around the world.

Implementation and Deliverables

The project included eight themed workshops, five dialogue sessions, and the creation of an e-Learning Community of Practice (CoP) platform, providing resources and fostering global collaboration.

Outcomes and Achievements (including Impact on Teaching and Learning)

Students gained intercultural communication skills, critical thinking abilities, and a deeper understanding of nature conservation. They reported enhanced confidence and leadership in promoting Education for Sustainable Development (ESD).

Evaluation

Individual interviews, focus group interviews as well as reflective journals were used for providing qualitative insights into participants' growth and engagement.

Dissemination, Diffusion and Sharing of Good Practices

Project outcomes were shared through conferences, workshops, seminars, and the CoP platform. This inspired global collaborations and the use of good practices.

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Project Title: A Fitness Buddy Program to Boost University Students' Physical Activity Levels

Principal Supervisor(s) and Unit(s):

Ms. HUANG Miny, Physical Education Unit

Project Objectives

The project aimed to significantly increase students' participation in regular physical activity by expanding the existing Fitness Buddy program. It sought to build supportive peer fitness communities to enhance students' motivation, physical fitness, mental well-being, and overall university experience. Additionally, it systematically evaluated the program outcomes to refine the model and inform future initiatives.

Implementation and Deliverables

- Five new Communities of Practice were established in fitness training, volleyball, golf, handball, and yoga, engaging about 150 students in an academic term.
- Three workshops were provided to equip participants with practical fitness knowledge and skills.
- A validated physical activity questionnaire was developed and administered to evaluate students' activity levels and well-being.
- Two conference presentations disseminated the project's insights.

Outcomes and Achievements (including Impact on Teaching and Learning)

Participation doubled compared to the previous years, significantly increasing weekly physical activity among participants and positively impacting students' stress levels, confidence, and overall satisfaction.

Evaluation

A mixed-method evaluation approach involving pre- and post-program questionnaires, student fitness logbooks, and reflective feedback effectively assessed improvements in students' physical activity, motivation, and wellness.

Dissemination, Diffusion and Sharing of Good Practices

Good practices developed were shared extensively within and beyond CUHK through academic conferences. Resources were also made accessible for continued use and replication.

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Project Title: SDG Learning Path Suggestion Using Generative Analytics

Principal Supervisor(s) and Unit(s):

Professor KING Irwin Kuo Chin, Department of Computer Science and Engineering

Project Objectives

The KEEP team integrated AI into KEEPCourse to enhance students' access to Sustainable Development Goal (SDG)-related courses. Using natural language processing and machine learning, the system categorized courses based on the United Nations' 17 SDGs. AI-driven recommendation algorithms personalized course suggestions by analyzing students' interests and learning histories. The platform also processed large-scale datasets, such as news and reports, to identify current trends, helping students align their academic interests with global sustainability goals and market demands. This initiative demonstrated a forward-thinking approach to AI in education, supporting long-term engagement and meaningful impact.

Implementation and Deliverables

In the planning phase, the SDG models and technologies were researched, and resource calculations were conducted. In the design phase, system requirements were refined using insights from planning, and validated classification algorithms. The development phase incorporated iterative prototyping with focus groups providing feedback. Testing involved closed beta trials with participants from diverse fields to assess SDG classification effectiveness. The project delivered a search engine enabling students to explore SDG-related courses and SDG trend reports to provide SDG insights into academic offerings.

Outcomes and Achievements (including Impact on Teaching and Learning)

The KEEP course search platform recorded over 70,000 course searches, generating 210,000+ SDG recommendations. The system was integrated into the new KEEP course search platform (cris.keep.edu.hk), enhancing accessibility. Given the absence of existing tools to aggregate and classify SDG courses, the platform leveraged United Nations' SDG indication data and a validated AI model for multilingual academic mapping, ensuring accurate course classification. It served as a centralized search hub for students exploring SDG-related courses across different providers. The SDG trend reports, published daily at cris.keep.edu.hk/trend-reports, offer real-time insights and are available for online viewing and PDF downloads. User feedback affirmed the platform's uniqueness as an aggregator for SDG courses, highlighting its value for students and educators.

Evaluation

The KEEP search engine incorporated one SDG categorization model using SDG indication data from the United Nations' SDG Data Platform. The SDG course recommendation system integrated the new KEEP course platform (cris.keep.edu.hk) to provide relevant suggestions to users. Additionally, SDG trend prediction model was developed to analyze news from major agencies and forecast emerging SDG topics.

Dissemination, Diffusion and Sharing of Good Practices

The KEEP course search engine now features SDG classification and trend reports, enabling learners both within and outside Hong Kong to explore courses aligned with SDGs. APIs have been provided to local universities, allowing them to access the SDG-classified course database and integrate it into their own systems, expanding the reach and impact of SDG-based education.

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Project Title: Enhancing Competency and Self-efficacy in Nursing Informatics among Graduate Nursing through Animated Video Production

Principal Supervisor(s) and Unit(s):

Professor TANG Wing Ki Fiona, The Nethersole School of Nursing

Dr. AHMAT Ricky, The Nethersole School of Nursing

Project Objectives

The project's objectives are 1) to develop a series of animated videos to enhance students' understanding of the importance of nursing informatics, 2) to equip students with the knowledge and skills require for creating animated videos, 3) to evaluate the perceived nursing informatics competency of students, 4) to increase students' intention to utilise technology for health promotion and education, and 5) to demonstrate competency in utilising technology for health promotion and education.

Implementation and Deliverables

The project team developed a series of animated videos to engage students in learning nursing informatics. A training workshop about animated video production was conducted for students. The students created animated videos which are tailored to their specialty areas. Project deliverables include a series of animated videos about nursing informatics and animated videos of patient education in various specialties areas.

Outcomes and Achievements (including Impact on Teaching and Learning)

The project significantly improved students' perceived competency across clinical informatics roles, basic and applied computer skills, wireless device skills, and attitudes. Students successfully created animated videos for clinical education, with majority of them expressing willingness to integrate technology into practice, reflecting enhanced knowledge, skills, and positive attitudes toward technology use. The initiative met its objectives, fostering professional development, and preparing them as adaptable, responsible leaders in healthcare.

Evaluation

The evaluation showed a significant improvement in nursing informatics competencies and self-efficacy, while students demonstrated technological proficiency by creating animated clips for health education. The carefully selected KPIs effectively guided the project's implementation and evaluation, aligning with objectives to ensure all targeted outcomes were achieved.

Dissemination, Diffusion and Sharing of Good Practices

The positive results and good practices were shared at two international conferences.

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Project Title: Evaluating and Promoting United Nations Sustainable Development Goals among Postgraduates Nursing Students: A Concurrent Mixed-Methods Design

Principal Supervisor(s) and Unit(s):

Professor LAU Ying, The Nethersole School of Nursing

Project Objectives

- (1) Determine the relationships between socio-demographic and work-related factors, sustainable development awareness (SDA), and nursing professional competence (NPC) in postgraduate nursing students using path analysis.
- (2) Explore the barriers and facilitators to implementing the SDGs in healthcare settings.

Implementation and Deliverables

In the quantitative study, 205 postgraduate students completed the questionnaire, involving socio-demographic and work-related factors, SDA, and NPC. In the qualitative study, 20 students were invited for face-to-face interviews based on data saturation.

We presented two SDG promotion workshops to postgraduate students and educators, respectively, on 11th February and 17th March, 2025.

Outcomes and Achievements (including Impact on Teaching and Learning)

In the quantitative study, the path analysis showed postgraduate students with higher social sustainability levels led to higher nursing care, value-based nursing care and medical and technical care competences. Students with higher environmental sustainability levels performed higher nursing care, value-based nursing care, medical and technical care and care pedagogics competences.

In the qualitative study, four themes were identified: limiting awareness and comprehension of SDGs, restricting application in health settings, willingness to put the SDGs into practice and building an SDG-friendly culture.

Evaluation

We amended the conference presentation to submit one more paper to disseminate the research outcome. We will submit qualitative and quantitative results in two peer-reviewed journals.

Dissemination, Diffusion and Sharing of Good Practices

The discussion among nursing education leaders and nursing educators during the workshops will inform future directions to promote SDGs within the curriculum at the Nethersole School of Nursing.

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Project Title: Construction Waste Rebeauty: Sustainable Design through Circular Reuse of Structural Components

Principal Supervisor(s) and Unit(s):

Professor WANG Shuaizhong, School of Architecture

Project Objectives

This project aims to bridge the gap between current theoretical discourses on Circular Construction and architectural practices, by imparting practical knowledge to students through hands-on construction and spreading the experience to validate Circular Construction's design potential.

Implementation and Deliverables

- Analysis and study of circular construction and reuse methods has been completed.
- Preliminary research on site, material, and local community coordination has been completed.
- A prototype experiment on material and tectonic testing has been photographed.
- Design workflow and digital preparation have been completed.
- Student workshops have been conducted and documented.
- The event, exhibition, symposium, and questionnaire have been conducted.
- Two papers summarizing the project have been published.
- Two review visits after the pavilion's demolition have been conducted and documented.

Outcomes and Achievements (including Impact on Teaching and Learning)

- For students, the workshop offered hands-on experience in circular construction, serving as a crucial introduction to low-carbon structural design.
- For villagers, the pavilion revived local building techniques, offering a poetic and public space for unique experiences. Reclaimed materials provide opportunities for creative expression.
- For workshop instructors, the innovative research approach validated low-tech methods to promote material reuse, laying a solid foundation for future research in circular construction.
- For visiting researchers and industry engineers, the symposium offered a fresh perspective on circularity, encouraging interdisciplinary work.

Evaluation

The project successfully fulfills its objectives to connect Circular Construction with architectural practice. It imparts hands-on knowledge to students and disseminates the approach to academia and the public through multimedia deliverables.

Dissemination, Diffusion and Sharing of Good Practices

- Dissemination of practical knowledge through hands-on experience of the students
- Sharing the approach to academic audiences through symposiums and journal articles.
- Broadening the public impact through exhibitions and media coverage.

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Project Title: Developing a Course of Engaging United Nations Sustainable Development Goals to Entrepreneurship Education

Principal Supervisor(s) and Unit(s):

Dr. NG Wing Fung Frank, Senior lecturer, Department of Management

Project Objectives

This project commences a course that incorporates the SDGs in entrepreneurship education. This project aims to improve understanding and awareness of the SDGs, as well as enhance the motivation and capability to pursue sustainability entrepreneurship.

Implementation and Deliverables

This project developed eight videos that covered 17 SDG. In addition, the PS and Co-S completed one written case submitted to the Sustainability Case Writing Awards by Ivey Publishing and PRME. The course also offered three seminars to students, inviting the case protagonists and other entrepreneurs sharing their experience and knowledge in sustainability entrepreneurship. At the end of the course, students concluded by pitching their sustainability initiatives.

Outcomes and Achievements (including Impact on Teaching and Learning)

Overall, students' understanding and awareness toward SDGs improved; the course enhanced their motivation and capability for sustainability entrepreneurship; students were satisfied with the multi-media cases developed in this project.

Evaluation

Monitoring data of understanding and awareness of SDFs and motivation and capability to pursue sustainability entrepreneurship was collected. The project met its objectives satisfactorily, supporting the University's Strategic Plan 2021-2025. An effective collaboration with ELITE and jcMotion led to high quality of the multi-media mini cases.

Dissemination, Diffusion and Sharing of Good Practices

This course was introduced in Teaching and Learning Innovation Expo 2024. International collaboration with Co-S and potential publication of international written case will disseminate the good practice to other institutions.

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Project Title: Inter-institutional Initiative in Teaching SDGs: Using a Scenario-Based Learning Approach

Principal Supervisor(s) and Unit(s):

Professor LEE Wai Ying Joanna, Department of Geography and Resource Management

Project Objectives

In collaboration with CUHK (Shenzhen), this project aims to develop an inter-institutional initiative to promote active learning of SDGs through group projects using a scenario-based learning approach (SBL). Under different scenarios of MDCs and LDCs, students are required to investigate the causes, impacts and solutions of a sustainability problem under the impact of climate change. Different inter-institutional learning activities serve as a platform for dialogue and knowledge sharing.

Implementation and Deliverables

Students were assigned as LDCs or MDCs to work on city impacts and responses to climate change under different scenarios. Students presented and were engaged in a dialogue about sustainability at a joint student seminar. The best project awardees shared their SBL experiences in a student-sharing session. This project has produced a project booklet, a website and a database of city responses to sustainability problems.

Outcomes and Achievements (including Impact on Teaching and Learning)

The outcome is an improved teaching practice, enhanced teaching collaboration and enriched understanding of sustainability under different contexts. This teaching experience with CUHK (Shenzhen) has further developed into a new collaboration initiative on sustainability education and leadership.

Evaluation

Students generally agreed that SBL is effective for learning SDGs and they were satisfied with the peer learning experience in the joint seminar. It has achieved the project objective of active learning.

Dissemination, Diffusion and Sharing of Good Practices

The teaching experiences are shared with CUHK and CUHK (Shenzhen) colleagues in two experience-sharing sessions. It is found that peer learning through seminar and project competition is found to be useful in increasing students' learning motivation.