Symposium

The University's Role in Taiwan's Ministry of Education Program for Gerontechnology Talent Development L. Y. Guo (Convener). *Gerontechnology* 25(s)

Participants: C.C. Yang (Taiwan), C.H. Chuang (Taiwan), Y.H. Tsai (Taiwan), C.Y. Wu (Taiwan).
ISSUE Taiwan has become a super-aged society in 2025. Talent demands in the health and welfare industry include growing demand for cross-sector and interdisciplinary talent, increasing need for communication and integration skills and rising demand for IT and professional knowledge workforce. Since 2022-2025, Kaohsiung Medical University as a health and welfare (including gerontechnology) education promotion center of the precision health interdisciplinary talent cultivation program of the Taiwan Ministry of Education. We linked 7 universities (including National Sun Yat-Sen University, Fooyin University, National Cheng Kung University, Chung Shan Medical University, National Tsing Hua University, Chang Gung University and National Taiwan University) as partner universities to execute this program. **CONTENT 1**. C.C. Yang (Taiwan) will present how they setup the channels and mechanisms for industry-academia matchmaking and link the unique strengths of each university to the summer boot camp, with ongoing empowerment and support for cross-campus teams. 2. C.H. Chuang (Taiwan) will present how they establish the smart long-term care microprogram in collaboration with the ICT and healthcare industries. 3. Y.H. Tsai (Taiwan) will present how they explore the strategies and outcomes of embedding smart-care technologies into dementia education to cultivate professionals with digital health and smart-care competencies. 4.C.Y. Wu (Taiwan) will present how they develop interdisciplinary talent possessing both integrative and entrepreneurial competencies, thereby accelerating the translation of gerontechnology into practical, localized services. **CONCLUSION** Research will show the inputs and outcomes in the health and welfare (including gerontechnology) field from the precision health interdisciplinary talent cultivation program of the Taiwan Ministry of Education (2022–2025). Expected key results including developing/launching curricula and programs, participants of trainees and the trained cross-campus Innovation and startup teams as well as their great performance while join the domestic and international competition will be introduced.

Symposium

Industry-Academia Matchmaking and Link the Unique Strengths of Each University to Support for Cross-Campus Teams C.C. Yang, H.F. Tsai, C.H. Chen, H.X. Chen, L.Y. Guo. *Gerontechnology* 25(s)

Purpose Taiwan transitioned to an aged society in 2018 and has become a super-aged society in 2025. Talent demands in the health and welfare industry are rising. **Method** Since 2022-2025, Kaohsiung Medical University as a health and welfare (including gerontechnology) education promotion center. We link 7 universities as partner universities. Firstly, we form a professional advisory group to establish regular channels of cooperation with institutions, industry, and local governments. Secondly, we setup the channels and mechanisms for industry-academia matchmaking. Thirdly, we support measures and international linkages. Meanwhile we linked the unique strengths of each university to the summer boot camp, with ongoing empowerment and support for cross-campus teams. Two courses including "Age-Friendly Smart Livable Environment Design" (Figure 1) and "Practical Applications of Gerontechnology" were delivered as summer boot camp each year since 2022-2025. **Results and Discussion** Outcomes in the health and welfare field (including partner universities), there are 692 total hours of courses were provided per year. 171 industry instructors, 118 faculty team members, 20 international faculty were included. In total, 2480 participants of trainees in the health and welfare field have received the course, among them 55% is undergraduate students, 22% is graduate students, 23% is postdoctoral researchers/ faculty members. Also, there are 36 Innovation and startup teams trained and join the domestic and international competition with very good performance. According to the award winners list of the 2023 gSIC (Global Student Rehabilitation Engineering and Assistive Technology Innovation Competition) in Thailand, both technical and design group gold medal were award to Taiwan student teams trained in this program. Totally facilitated the successful career transition of 43 trainees into the industrial sector.

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Cultivating Smart Long-Term Care Talents through Cross-Disciplinary Innovation and International Collaboration Y.H. Tsai & C.H. Chuang. *Gerontechnology* 25(s)

Purpose In response to Taiwan's shift toward a super-aged society, this project applies the principles of innovation, inclusion, and sustainability to establish the Smart Long-term Care Microprogram in collaboration with the ICT and healthcare industries. The program aims to (1) cultivate professionals with integrated expertise in technology, psychology, and management; (2) apply design thinking to develop and validate gerontechnology innovations; and (3) strengthen academia–industry–healthcare and international networks supporting Taiwan's Healthy Aging 2030 vision. **Methods** The Smart Long-term Care Microprogram was designed as an interdisciplinary curriculum integrating long-term care, information technology, management, and psychology. Over ten courses combined lectures, practicums, and internships emphasizing design thinking, AIoT health applications, and human-centered innovation. A 3:1 faculty-to-industry mentor ratio promoted experiential learning and problem-based collaboration. Partnerships with hospitals, long-term care institutions, and industries supported workshops, research symposia, and field practicums, with data systematically collected on student participation, innovation outcomes, and translational performance to evaluate program effectiveness. **Results and Discussion** The program trained over 3000 students and professionals, nurtured six innovation teams, including a Smart Gait Analysis Shoe for mobility assessment, a Sarcopenia Risk Prediction System (accuracy = 0.90) for muscle health monitoring, and a Smart Swallowing Function Monitoring System (r = 0.96). Two AI-based digital health platforms were also developed: the AI-powered Migraine Management Platform, which integrates digital headache diaries and wearable data for personalized risk prediction, and the Generative AI Care Plan Platform, which optimizes documentation and supports data-driven decision-making in long-term care institutions. International collaborations with Japan, Vietnam, the United States, and the Philippines further advanced gerontechnology and precision health through joint research and knowledge exchange. Overall, over 80% of students expressed high satisfaction and viewed the course as strongly aligned with industry needs, with over 70% reporting enhanced cross-disciplinary collaboration skills. These outcomes position the Smart Long-term Care Microprogram as a replicable, sustainable model for cultivating AI-enabled interdisciplinary talent and advancing digital innovation for healthy aging.

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Symposium

Integrating Gerontechnology into Dementia Education: A Cross-Domain Talent Cultivation Model
W.C. Cheng, P.C. Su, C.Y. Yu, J.Y. Chen, Y.H. Tsai. *Gerontechnology* 25(s)

Purpose Due to the rapid rise in the aging and dementia populations, dementia prevention and supportive care is a public health priority. This project, based on the four-year Precision Health Interdisciplinary Talent Cultivation Program (2022–2025), developed a cross-domain talent cultivation model that integrates gerontechnology, health care, and educational innovation. The purpose was to explore the strategies and outcomes of embedding smart-care technologies into dementia education to cultivate professionals with digital health and smart-care competencies. **Method** The ADDIE model (Analysis, Design, Development, Implementation, Evaluation) was used to implement the program via the Fooyin Interdisciplinary Talent Center. The curriculum involved faculty from nursing, long-term care, nutrition, physical therapy, and IT, in collaboration with local governments, NGOs, and industry partners. Seven modular courses (10 credits) were developed, following Bloom's taxonomy, and structured around three core domains: humanistic living, health promotion, and gerontechnology. The capstone course, Innovative Assistive Technology and Service Co-Creation, assessed learning integration. Continuous curriculum refinement was supported by feedback loops and learning evaluations. **Results and Discussion** Over four years, the project established 37 cross-sector partnerships and implemented simulation-based smart-care learning environments. A total of 194 students completed the curriculum. Results showed an average improvement of 25–30% in student competence across smart-care knowledge, dementia care skills, and cross-disciplinary collaboration. Qualitative findings indicated that gerontechnology integration enhanced innovative thinking and promoted understanding of dignified care. The model proved effective in fostering interdisciplinary learning and practical skills, creating a sustainable talent development mechanism for the health industries. The project strengthened university–industry–government collaboration and addressed the national agenda for dementia-friendly communities. Future plans involve expanding international cooperation to establish a global smart-care talent network.

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Advancing Gerontechnology Education by Bridging Classroom and Industry at Chang Gung University: A Collaborative Ecosystem for Talent Development. C. Y. Wu & Y. L. Lo. *Gerontechnology* 25(s)

Purpose Rapid global population aging necessitates the integration of smart technologies into eldercare. Enhancing older adults' health, autonomy, and social participation—while optimizing public resources—requires innovative collaboration between education and industry. This study establishes a comprehensive gerontechnology ecosystem at Chang Gung University. The initiative aims to develop interdisciplinary talent possessing both integrative and entrepreneurial competencies, thereby accelerating the translation of gerontechnology into practical, localized services. **Methods** A systematic curriculum framework and diversified training strategy were implemented across three dimensions: (1) Internationalized & Systematic Learning: Development of a four-domain framework (i.e., Aging Health and Inclusive Technology, Interdisciplinary Digital Technology, Practical Training, and Innovation and Entrepreneurship)for articulating interdisciplinary summer courses, and a "Smart Health" micro-credential for motivating student participation with the strategies of lectures and workshops to foster global exchange. (2) Gerontechnology Practicum: Integration of theoretical instruction with field practice—including aging simulations, smart device operations, and fieldwork observation/practice—to strengthen interdisciplinary execution capabilities. (3) Entrepreneurial Incubation: Establishment of a standardized training protocol involving start-up forums, competitions, and professional mentoring to nurture student-led ventures.For the learning and practicum dimensions, the outcomes were measured using Course Satisfaction. For the entrepreneurial incubation dimension, the outcomes were measured by the number of teams trained, entrepreneurial participants/students mentored, companies established, and existing teams advised to participate in entrepreneurial competitions. **Results and Discussion** Over a four-year period, summer courses engaged over 450 participants, with 41 students enrolling in the Smart Health micro-program and 16 getting certification. Co-curricular programming (60+ events) attracted over 4,000 attendees, achieving satisfaction ratings exceeding 87% for courses and 85% for activities. The courses were rated as high satisfaction. We trained 3 start-up teams, mentored 12 entrepreneurial participants, assist in 2 new companies established, and tutored 4 teams participating in competition activities. The program successfully facilitated knowledge application, fostering five student entrepreneurial teams, two of which launched independent companies. The training framework and strategies demonstrated effective results. Future research may follow up the development of the students with certified micro-program to underscore the long-term effects.

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