

Article

Care service attendant training based on culturally responsive pedagogy and design thinking for immigrant women in Taiwan

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Abstract: A significant cohort of Southeast Asian women in Taiwan, having married locals, constitutes a disadvantaged group entangled in the issues of gender, marriage migration, and social class. The lack of human capital, social discrimination and urgent personal economic demands have caused immigrant women in Taiwan to become a source of inexpensive labor in the labor market, they usually prioritize vocational training for employment. Furthermore, the rapidly growing elderly population has resulted in a severe shortage of quality care services in Taiwan. Despite Taiwanese government training for immigrant women, diverse sociocultural factors hinder them from pursuing caregiving professions. Therefore, this study aimed to investigate the effects of care service attendant (CSA) training based on culturally responsive pedagogy (CRP) and design thinking (DT) for immigrant women in Taiwan. Nine Vietnamese and Indonesian immigrant women in Taiwan attended and completed the training. The CSA training comprised core academic modules and practicum modules and was conducted in groups for 170 h over 5 weeks. This study employed a qualitative research approach, gathering data through interviews, observation, and document analysis. The results revealed that CSA training based on CRP and DT was effective in improving immigrant women's satisfaction with training and their rate of employment as CSAs. Specifically, in addition to basic care service professionalism, the female immigrant trainees developed proactive attitudes toward problem-solving. Moreover, the integration of Taiwanese culture and frequent communication in the training facilitated the self-confidence of these trainees. In the workplace, these female immigrant CSAs' commitment to meeting clients' needs and innovating their service boosted the clients' appreciation and their own cultural competency and empowerment. Overall, this study suggests that the application of CRP and DT in CSA training is a promising way of enhancing the workforce capacity of female immigrant CSAs and has value for low-skilled adult trainees. However, structuring the learning processes clearly and involving instructors with multicultural education and DT education competency are critical to implementing such vocational training.

Keywords: care service attendant training; culturally responsive pedagogy; design thinking; immigrant women; vocational training

1. Introduction

Cross-border marriage is a consequence and manifestation of globalization. For more than 30 years, an increasing number of women from economically disadvantaged Southeast Asia have migrated to affluent East Asia, aiming for a better future through cross-border marriage. These female immigrants from Southeast Asia have played a crucial role in international migration flow (Bélanger et al., 2010). Since the 1990s, Taiwan has experienced a significant increase in commercially arranged marriages between Southeast Asian women and Taiwanese men from low socioeconomic backgrounds (Wu, 2023). In the end of 2023, more than 116,000 Vietnamese women

and 31,000 Indonesian women had moved to Taiwan by marrying Taiwanese men (Ministry of Interior, 2024), constituting a disadvantaged population that faces the intertwined issues of gender, marriage migration, and social class (Romero, 2018).

To support the household financing of their new families, women from Vietnam and Indonesia view employment as a pressing need. The lack of human capital, social discrimination and urgent personal economic demands have caused immigrant women to become a source of inexpensive labor in the labor market in their host countries. For immigrant women, participating in job training and subsequently enhancing their personal capabilities, social mobility, and autonomy within their families and ethnic communities are crucial for their social integration in the host country. Thus, many countries provide policy support to encourage immigrant women to participate in job training (Kogan, 2010). Since 2005, the Taiwanese government has invested a significant budget to the provision of job training for immigrant women. However, studies have found that job training programs for immigrant women in Taiwan often adhere to a Taiwanese-centric assimilation approach, neglecting to account for these women's sociocultural experiences and failing to empower them (Wu, 2014).

In recent years, the rapidly growing elderly population has resulted in a severe shortage of quality care services, making caregiving a critical global public health and social care issue. In Europe and North America, female immigrant workers have played essential roles in providing care for the older population (Lee et al., 2023; Romero, 2018). The Taiwanese government actively provides care service attendant (CSA) training for immigrant women. However, caregiving work involves ideologies, value systems, cultural practices, and care work scripts that vary significantly across sociocultural contexts (Hennebry and Walton-Roberts, 2019), thus making immigrant women in Taiwan hesitant to pursue caregiving work (Wu, 2023).

The current drawbacks of CSA training in Taiwan have included the short duration of internship programs, trainees' merely observing instructors' demonstrations without regular hand-on practices, and the failure to cultivate trainees' cultural competences (Chiu et al., 2010). Then, most of the CSAs who completed the training were likely to be unable to take on the care tasks correctly or proficiently. What's more, they even couldn't understand their clients' needs and just provided care service based on their own ideas, which caused their clients' dissatisfaction with the care and the high turnover rate among CSAs (Lin et al., 2021). In fact, understanding the culture of clients significantly influences the quality of caregiving services since CSAs must continuously adapt and respond creatively to the needs of their clients. This issue of cultural competency is more critical for clients' care service satisfaction than the language skills of CSAs (Samsi et al., 2018; Srivastava, 2023).

In education and training, culturally responsive pedagogy (CRP) emphasizes meeting learners' cultural needs (Ferreira et al., 2020), while design thinking (DT) focuses on learners' awareness of and empathy for target users' life contexts, using brainstorming and multiple hands-on experiments to provide services or products that meet users' needs (Brown, 2009). Both CRP and DP approaches prioritize learners' empowerment and sustainability of learning and career development. As governments and industries increasingly emphasize sustainability, implementing sustainable vocational training programs becomes especially important, particularly for immigrant female trainees (Mathews and Wrigley, 2017; Munyai, 2016). Additionally,

positioned within the realm of adult education, vocational training endeavors to rectify societal inequities and to empower disadvantaged adult trainees (Caffarella and Merriam, 2000). Actually, caregiving work tends to reflect class differences between affluent clients and impoverished immigrants who work as CSAs (Lan, 2010). Hence, this study attempted to integrate the CRP and DT approaches into CSA training for female immigrants to equip them with the empathy, collaboration, problem-solving, and innovation skills that would allow them to provide high-quality care services, ultimately ensuring the sustainable development of their personal caregiving careers. This innovative approach to professional CSA training could transcend racial and class divisions within the caregiving profession. Therefore, this study aimed to investigate the effects of a CSA training program based on CRP and DT for Vietnamese and Indonesian immigrant women in Taiwan.

2. Literature review

2.1. Culturally responsive pedagogy

CRP suggests that the purpose of education and vocational training is to address social injustice and empower all disadvantaged learners. Culture lies at the core of education and training, determining individuals' thoughts and behaviors and subsequently affecting their learning (Caffarella and Merriam, 2000; Wu, 2021). Adult learners in vocational training, who bring unique experiences into the learning environment based on their specific cultures, construct personal learning according to their known experiences. Immigrant women, who have undergone early socialization in their home countries, become adult learners in their host countries through vocational training, thus facing various social, cultural, and national boundaries. Cultural discontinuity is a significant barrier to immigrants' learning (Alfred, 2009).

CRP primarily affirms the culture of minority group learners and emphasizes the establishment of culturally inclusive learning environments to allow learners to experience culturally relevant curricula, develop positive cultural identities, improve their learning performance, and understand and practice their personal roles in action, thereby increasing their vocational training participation, employment, and income (Kim and Merriam, 2011; Nolan and Xenofontos, 2023). Therefore, promoting culturally responsive training requires instructors to understand the cultural differences between the learning environment and learners, be literate in multicultural education and value and incorporate the early experiences of nonmainstream learners. CRP also involves creating cooperative learning communities and applying diverse delivery to establish meaningful connections between the learning environment and learners' prior experiences (Lucas and Villegas, 2002; Wu, 2021).

2.2. Design thinking

DT, popularized by Stanford University, is a social technology that uses empathetic, interdisciplinarily collaborative, and innovative methods focusing on user experiences (Munyai, 2016). According to a research-based perspective, DT approach applies diverse methods to identify user needs and employs action-oriented rapid prototyping and continuous testing to develop systems, services, or products that meet

user needs. DT approach has been applied to various domains, including business management, education, and health care (Altman et al., 2018; Levander et al., 2023).

Considering the characteristics of CSA training and the life experiences of immigrant female trainees, this study employed the Stanford model of DT, which is easy to implement, structured, and widely used. The DT process consists of five iterative stages: (1) empathizing, where team members immerse themselves in understanding users' real experiences and perspectives in diverse ways, such as through observation and interviews to gain a deeper understanding of the relevant problems and contexts; (2) defining, which encompasses analyzing the information collected in the previous stage for defining specific potential problems and needs; (3) ideating, which involves brainstorming to generate a variety of ideas and solutions pertaining to the identified problems while striving to ensure the development and clear articulation of these ideas; (4) prototyping, which includes rapidly developing tangible products or processes based on the ideas generated during the previous stage; and (5) testing, which includes sharing the prototypes with target users to obtain feedback and lead to further refinement, modification, or reexamination (Kurtmollaiev et al., 2018; Levander et al., 2023; Liedtka, 2018; Solomon et al., 2023).

The unique problem-solving framework presented by DT can inspire professionals in complex clinical work in the health care sector and contribute to their empowerment and sustainable career development (Matthews and Wrigley, 2017; McLaughlin et al., 2019).

In summary, both CRP and DT primarily focus on the needs and the socio-cultural context of learners or users, learners' empowerment, and the sustainability of learning or product/service development, as well as encourage group collaboration. Therefore, this study applies CRP to the core academic modules of CSA training for immigrant women, thereby placing trainees at the center and laying a foundation for training. It also integrates DT into the practicum modules of the CSA training program, thereby placing the future service clients at the center to further enhance the effectiveness of training.

2.3. Care service attendant training in Taiwan

In response to the aging population, the Taiwanese government actively provides training for CSAs to facilitate the localization and deinstitutionalization of care services for elderly clients. However, the retention rate of CSAs is only 24%, resulting in a significant shortage of caregiving personnel (Lee et al., 2022). Working in various settings, including medical institutions, nursing facilities, social welfare organizations, and homes, CSAs provide comprehensive care and services to both physical and mental disabilities as well as elderly adults to engage them in daily activities and independent lives. CSAs' work responsibilities encompass basic life care (e.g., feeding), safety maintenance (e.g., accident prevention), preventative care (e.g., massage), invasive care (e.g., sputum suction), psychological care, medical assistance (e.g., catheter care), leisure and recreation assistance, rehabilitation aid, and household services. Given the diversity of their service clients, the services that they provide must be highly individualized and flexible (Cangiano and Shutes, 2010; Ministry of Health and Welfare, 2022).

In Taiwan, certified CSAs must be at least 16 years of age and have completed official CSA training offered by officially guaranteed institutions to obtain a government-issued CSA certificate. The CSA training program must include core academic modules, such as symptoms and disease management and first aid, which require a total of at least 50 h and practicum modules which require a total of at least 40 h (Ministry of Health and Welfare, 2022).

While many scholars have advocated for CRP in adult education and training, this approach has been implemented only in some studies on basic adult education and higher education, with culturally responsive vocational training programs remaining scarce (Wu, 2021). Furthermore, while a small but growing number of studies have applied DT in healthcare clinic settings to improve patient care experiences and clinical outcomes and reduce healthcare costs, only limited research has applied DT to the education or training of high-level professional health care personnel, such as nurses and undergraduates in medical education (Kroeze and van de Grift, 2016; Levander et al., 2023; Solomon et al., 2023). Moreover, previous research on DT has often lacked a clear description of the DT process, thus making it challenging for other programs to adopt this approach in this field (Lin et al., 2015; McLaughlin et al., 2019).

Therefore, this study attempted to develop a distinct CSA training program, allowing immigrant female trainees to play the role of designers to cultivate their problem-solving and innovative service skills based on their cultural competency.

3. Methods

This research was an intervention study that employed a qualitative research approach to gain a comprehensive and practical understanding of the phenomena under investigation.

3.1. Participants

This study recruited 9 immigrant women from Vietnam and Indonesia who were living in a southern Taiwanese county. Seven participants were from Vietnam, and two were from Indonesia. All the participants had moved to Taiwan due to their marriages with Taiwanese men. The participants' average age was 42.2 years, and they had lived in Taiwan for an average of 15.3 years at the time of the study. **Table 1** shows the demographic information for these participants. All participants provided informed consent in accordance with local ethical guidelines.

Table 1. Information on female immigrant trainees.

Name	Home Country	Age/ Years in Taiwan	Pre-Training Job	Post-Training Job	Reasons for Not Working as a Resident CSA after Training
Amy	Vietnam	39/ 19	Hair dresser	Personal CSA attendant	
Bella	Vietnam	57/ 26	N/A	N/A	Physical incapacity
Cindy	Vietnam	28/ 7	Farming	Farming	Being responsible for household farming
Ellen	Vietnam	41/ 19	Private caregiver	Resident CSA	

Table 1. (Continued).

Name	Home Country	Age/ Years in Taiwan`	Pre-Training Job	Post-Training Job	Reasons for Not Working as a Resident CSA after Training
Fall	Vietnam	42/ 2	Hotel housekeeper	CSA in a convalescent center	
Gina	Vietnam	43/ 16	Farming	Farming	Being responsible for household farming
Helen	Vietnam	47/ 18	Owner of Vietnamese eatery	CSA in a convalescent center	
Ida	Indonesia	35/ 6	Factory worker	Resident CSA	
Jane	Indonesia	48/ 27	Factory worker	Resident CSA	

3.2. Intervention program

The CSA training program targeted immigrant women from Vietnam and Indonesia in Taiwan and aimed to equip them with knowledge and skills related to care services with the goal of enabling them to reflect on and improve the care services they provide and ultimately to secure employment as CSAs.

Based on the government’s regulation, the CSA training program was developed by two care service professors, one director of a convalescent center, one experienced CSA, and one professor specializing in vocational training for immigrant women. This study integrated the principles of CRP and DT into the CSA training program for female immigrants, which was implemented with government approval. The CSA training sessions took place for approximately 6–8 h per day, five days per week, over a period of five weeks. In addition to providing course materials in Chinese, the study offered materials for some courses in core academic modules in Vietnamese and Indonesian. After completing the training courses, the trainees underwent evaluations of their care service abilities. Trainees who passed the evaluation obtained official CSA certificates issued by the government. The training program, which consisted of core academic modules (76 h) and practicum modules (94 h), lasted for a total of 170 h. The detailed program protocol is presented in **Table 2**. Overall, the program included an extra 80 h of courses in addition to the government-mandated instruction.

Table 2. Protocol of the CSA training program.

Modules	Core modules	Practicum modules
Themes	1. Taiwanese culture	
	Taiwanese society (ethnicity, festivals, religion, taboos)	
	Basic languages in Taiwan	
	Taiwanese cuisine (eating habits, local delicacies)	1. Introduction of DT approach
	Introduction to Indigenous cultures	2. Internships in private homes
Gender equality in workplaces		3. Internships in daycare centers
2. Roles of care service attendants		4. Internships in convalescent centers
3. Basic care services		5. Presentation of implementing DT proposals
4. Special needs of and services for clients		
5. Home care service		

In the program, the trainees were divided into two groups, one with four participants and the other with five. The core academic modules were conducted based on CRP, integrating the life experiences of trainees into the development of care

service expertise. Additionally, themes pertaining to Taiwanese culture were added to the core academic modules. Trainees were encouraged to share their home country’s caregiving service culture and compare it with what they had learned. One experienced Vietnamese female immigrant CSA was also invited to share her work experiences with these trainees.

In the practicum modules that employed a DT approach, the trainers introduced the application, content, and corresponding steps of DT in the clinical practicums in terms of care services. The trainees were divided into 2 groups to practice in clients’ homes, convalescent centers, and day care centers for older adults. To ensure clients’ personal privacy, the internships in clients’ homes were conducted in traditional ways. The internships in convalescent centers and day care centers for older adults were conducted using a DT approach. The DT approach used in the internship process, which was guided by instructors and assisted by learning materials, required the trainees to engage in a continuous process of observation, discussion, implementation, review, and documentation, as shown in **Table 3**. The trainees’ DT proposals in the practicums are shown in **Table 4**.

Table 3. Design thinking process in the practicum.

	Practicum in convalescent centers	Practicum in day care centers
	Targets: 5–6 elderly Individuals	Targets: 6–8 elderly individuals
Empathizing 2.5 days	Establishing relationships with clients Understanding clients’ daily life contexts in various ways Identifying clients’ needs for improvement	
Defining	Discussion among group members and inquiries with instructors and CSAs in centers to confirm the exact needs of the clients	
Ideating 2.5 days	Based on the identified needs of the clients, exploring various solutions and then confirming the most appropriate ideas for services or activities through brainstorming, inquiries with instructors and CSAs in centers, and web searches	
Prototyping	Transforming appropriate ideas into actual service processes or activity proposals Examining the service proposal and making modifications	
Testing 1.5 days	Testing the prototypes of service proposals on clients Gathering feedback Presenting the results of implementing the proposals	

Table 4. Trainees’ DT proposals in the practicum.

Group Sites and activities	Group A	Group B
Learning activities in day care centers	Elderly individuals handmade and tasted modified Vietnamese spring rolls.	Elderly individuals made stretching paper cup frogs.
Leisure activities in convalescent centers	Dwellers practiced Vietnamese fan dancing as a leisure activity.	Dwellers were provided with haircuts, facial massages, nail services, and warm conversation and companionship.

3.3. Workshop for training instructors

This study conducted a three-day workshop for the training instructions with the following objectives: (1) to encourage instructors’ self-reflection on their own perceptions of immigrant women and the importance of vocational training; (2) to develop instructors’ cultural competence, including becoming familiar with Vietnamese and Indonesian caregiving service cultures, comparing those services with

Taiwanese caregiving services, understanding the life backgrounds of immigrant women in Taiwan, and developing the ability to communicate with immigrant female trainees; (3) to enhance their teaching competence, including facilitating group discussions and collaboration as well as trainees’ question asking and insight sharing; and 4. to foster their DT education competence.

3.4. Data collection and analysis

In this study, data were collected through observations, semistructured interviews, and document analysis. During the intervention, participants’ involvement in the program was observed, and the trainees’ learning worksheets, DT proposals of care services, and final training evaluation reports were collected. Semistructured inter-views were conducted twice. The first interviews with all immigrant women trainees and five instructors (2 instructors in core modules and 3 instructors in practicum modules) were conducted one week after the program to understand the learning ex-periences of the trainees. The second interviews with six immigrant women who worked as CSAs were conducted six months after the training to understand their working experiences related to the training program.

Interview transcripts, observation records, and documents were analyzed using thematic analysis. The transcripts, records, and documents were initially coded and then grouped into themes. These themes were subsequently refined and categorized. Finally, constant comparative analysis was applied to validate the emerging patterns (Braun and Clarke, 2019). To ensure the trustworthiness of the data analysis, participants reviewed the summary of the findings and confirmed the accuracy of the interpretations (Carlson, 2010).

The overall procedures involved in the implementation of this study are shown in **Figure 1**.

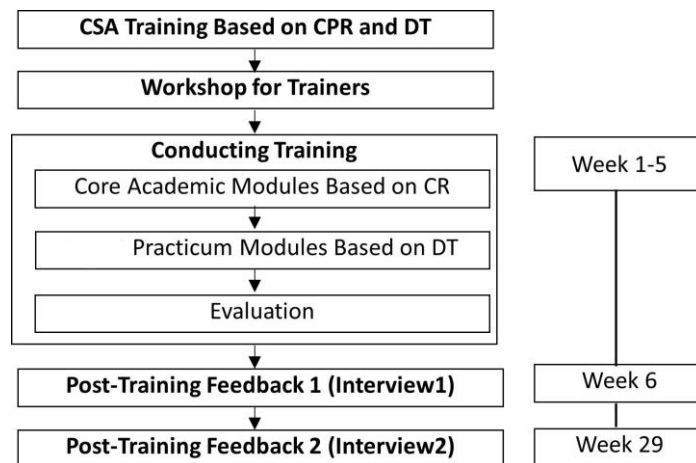


Figure 1. Procedures of conducting the research.

4. Results

This study reveals the effectiveness of the CSA training program for female immigrant CSAs in terms of the following aspects: Course satisfaction, acquisition of knowledge and skills, posttraining employment rate, and workplace applications.

4.1. Trainees were satisfied with courses focusing on personal culture, sisterhood, and task-oriented internships

4.1.1. The training rooted in trainees' personal life experiences enhanced their self-respect

The instructors strove to incorporate the trainees' life experiences in Taiwan and their home countries into their professional care service learning. This approach improved the trainees' sense of respect and created a foundation for new learning.

Most trainees only had caring experience with family members either in their home countries or after moving to Taiwan. Therefore, instructors encouraged trainees with prior care service experience to share their experiences as a basis for their learning. Furthermore, while the instructors actively guided the trainees to consider the differences between care services in Taiwan and those in Indonesia and Vietnam, they explained the life contexts underlying these differences to help the trainees understand and learn Taiwanese care service culture more effectively.

In the "Nutritious Meals and Preparation Principles" course:

Instructor: What are the special fish-eating habits of elderly people in Vietnam and Indonesia?

Gina: In my home country, older people insist that fish should not be turned over while eating because it is believed that flipping the fish is like flipping a fishing boat, which is considered bad luck!

Instructor: Taiwan's older generation has a similar belief, especially among fishermen. People in Taiwan and your home country share some customs! So, when you serve clients, please pay attention to these cultural nuances (Observation).

As Jane mentioned, "I believed I was here to learn how to be a good CSA, but the training started with our own hometown experiences. This made me feel the teachers valued us"! Ida added, "What's most important is that it became easier to learn some challenging content through the integration of the training with our home country experiences and their comparison with Taiwanese culture"!

4.1.2. Supportive sisterhood fostered trainees' learning and life adaptation

In other forms of general vocational training, immigrant women are usually an invisible minority on the margins due to their low levels of proficiency in Mandarin, distinct life experiences, and limited numbers (Wu, 2014). However, in this program, the entire class comprised immigrant women who were organized into small groups for training. This allowed the female immigrant trainees to engage in conversations comfortably using their native languages in the classroom and even to share their hometown flavors at break, which fostered a sense of security and life support among the trainees.

As Gina, who had recently arrived in Taiwan, remarked, "I don't know many Chinese characters, but my classmates always helped me with translations. In the practicum, we worked in groups. The members brainstormed activities together". Instructor Autumn also mentioned, "In other traditional classes, trainees tend to be distant. But in this class, perhaps due to the grouping activities and the fact that these female immigrants were all from the same countries, they helped each other. In the practicum, they were not afraid of on-site technical exercises because the group

members corrected and provided demonstrations for each other. It seemed that a classmate's issue was everyone's issue".

This supportive sisterhood facilitated not only the trainees' learning but also their life adjustment. As Ida noted, "My husband, working in northern Taiwan, is usually not at home. When I was attending the training, my child kept falling ill, and my classmates told me how to go for medical assistance and take care of my child... with my classmates' help, I could care for my child better".

4.1.3. The task-oriented practicum encouraged trainees' active learning

The instructors and trainees highly appreciated the practicum based on the DT framework. These internship programs were more time-consuming than traditional ones, but the processes of observation, discussion, design, execution, and review enabled immigrant female trainees to engage in an in-depth exploration of clinical issues. **Table 4** outlines the DT projects undertaken by the trainees in the practicum.

"In this program, the internships were structured in groups, employing a design thinking approach, which encouraged the trainees to get closer to clients and to provide services that would better meet their needs. This type of internship provided a clear direction and purpose for these trainees", Instructor Jill noted. "In other traditional training programs, during the practicum, trainees typically observed how the instructor worked without being proactive in approaching the clients. However, the trainees in this program immediately and voluntarily offered to help with bathing and changing diapers for elderly dwellers in convalescent centers", Instructor Gilled noted with praise.

4.2. Trainees cultivated problem-solving ability and proactive warmth

According to government regulations, only participants in the CSA training program who attend regularly and pass the professional evaluation can obtain certificates and qualify as professional CSAs (Ministry of Health and Welfare, 2022). All nine female immigrant trainees in this study completed the training and obtained CSA certificates, thus indicating that they possessed the professionalism needed to become CSAs. Additionally, through this training, the trainees in this study acquired problem-solving ability and proactive warm caring professionalism.

4.2.1. The challenging DT practicum fostered trainees' problem-solving ability

The trainees in this study highly appreciated the practicums based on DT. Compared to trainees in other traditional training programs, the trainees in this program spent more time learning and were required to improve their service more often. Although DT training processes such as observation, discussion, ideation, execution, and review were challenging, these trainees developed problem-solving capabilities to enhance their care service quality. The DT projects that the trainees developed received approval from both clients and instructors. "During the internship, although we had finished planning activities for elderly people, we refined the programs repeatedly when the instructors found something wrong. Consequently, the elderly clients really liked our final design thinking projects! Through the design thinking practicum processes, I got to know more about the thoughts of elder adults! I really like this kind of internship, even though it's more complicated and tiring! But we learned to identify problems and to search for solutions", said Helen. "What's most

important, we realized we have the ability to come up with and provide better care services”, Amy noted.

The instructors particularly suggested that the female immigrant trainees had developed problem-solving abilities. “When these female immigrant trainees took on a task, they observed, asked questions, and thought of possible solutions. They are the best group of interns I’ve had this year. The design thinking approach helps trainees become caregivers who can effectively solve problems”, Instructor Lily mentioned.

4.2.2. Client-centered internships cultivated trainees’ empathy and proactive warmth

The practicum based on DT encouraged the trainees to consider users’ needs and improve their service accordingly, which helped the immigrant female trainees develop empathy, approach clients proactively, and treat them with genuine warmth. As Instructor Fiona noted, “These immigrant female trainees’ caregiving skills were more proficient than those of regular trainees, mainly because they were proactive in approaching and serving clients, making efforts to sincerely make clients happy”! “During the internship at the convalescent center, one group of the trainees applied lotion to the elderly individuals to prevent dry skin and itching; they also trimmed the elderly individuals’ nails and eyebrows to make them feel more lively... The elderly persons were reluctant to part with the trainees when the internship was over”, Instructor Autumn recalled.

4.3. Trainees obtained a high employment rate during the COVID-19 pandemic

Six months after completing the CSA training program, a total of six female immigrant trainees took on roles as CSAs. Among this group, three individuals worked as home CSAs, two worked as CSAs at convalescent centers, and one worked as a personal home-based CSA. Three trainees did not pursue caregiving jobs. One of these individuals, after working as a home CSA for two weeks, felt that her physical ability was too weak to retain the job and resigned. The other two trainees were not working as CSAs due to strong demands from their spouses to assist with farming activities at home. In terms of the proportion of trainees who were engaged in care service after completing CSA training, compared to the employment rates among other trainees in local regular CSA training programs (54%) and immigrant female trainees in CSA training programs (50%), the employment rate for the trainees recruited in the research was higher (66.7%). Notably, this training program was completed during the initial COVID-19 pandemic, at which time the demand for CSAs decreased dramatically (Chu et al., 2021). Despite this challenge, a significant 66.7% of the trainees obtaining employment as CSAs, which was quite commendable.

4.4. In workplaces, trainees owned clients’ recognition and self-confidence through heartfelt and innovative care services

4.4.1. Integrating Taiwanese culture into training enhanced trainees’ self-confidence and decreased their adaptation time

The CSA training program in this study incorporated CRP, thereby not only integrating the trainees’ prior experiences but also familiarizing them with Taiwanese

culture to equip them with a profound understanding of their future care service work. Given these female immigrant trainees' varying lengths of stay in Taiwan, some Taiwanese cultures were added to the training, including Taiwanese society, Taiwanese language, and leisure activities, traffic safety, and cuisine for elder adults, to help the trainees gain a more in-depth understanding of the living contexts of Taiwanese clients.

"Because I understood more about Taiwanese culture, I feel more confident and at ease when working in clients' households. At the same time, I can be quickly familiar with the dietary habits of clients, saving time that would otherwise be spent on adaptation", said Amy. Furthermore, the cultural taboo course reminded immigrant women to be cautious when providing care services. "Due to these courses of Taiwanese culture, I can engage with a wider range of conversation topics with my clients", Bella noted.

4.4.2. Discussions, presentations, and record-keeping in training improved trainees' workplace communication and report writing

The training program in this study included various group discussions and presentations. For example, during the DT internship, the trainees presented their initial ideas concerning the service proposals and discussed the results of the implementation of group proposals. These immigrant trainees initially felt nervous and shy about public speaking. However, these experiences gradually empowered the trainees to communicate confidently with others, which significantly improved their ability to express themselves and interact with clients during their care service. As Ida related, "I have been in Taiwan for six years, but I mostly worked in a factory for the first five years, where I hardly had to talk to people. However, during the training, we were encouraged to keep discussing and expressing our opinions. This made me less afraid to communicate with clients in my workplace. My Taiwanese language literacy has improved a lot now, and I can even teach my daughter how to speak Taiwanese and help her with her homework".

Furthermore, the DT internship required the trainees to record observations, discussions, implementations, and reviews. As Cindy noted, "Although we hadn't written much before, the process of recording our activities in Vietnamese, Chinese, and phonetic symbols in the practicum, which was challenging, seemed to improve our thinking clarity and writing skills". Fall commented, "Compared to my immigrant colleagues who hadn't undergone this type of training, it's much easier for me to fill out work reports in my work now". **Figure 2** shows the trainees' worksheets from the practicum.

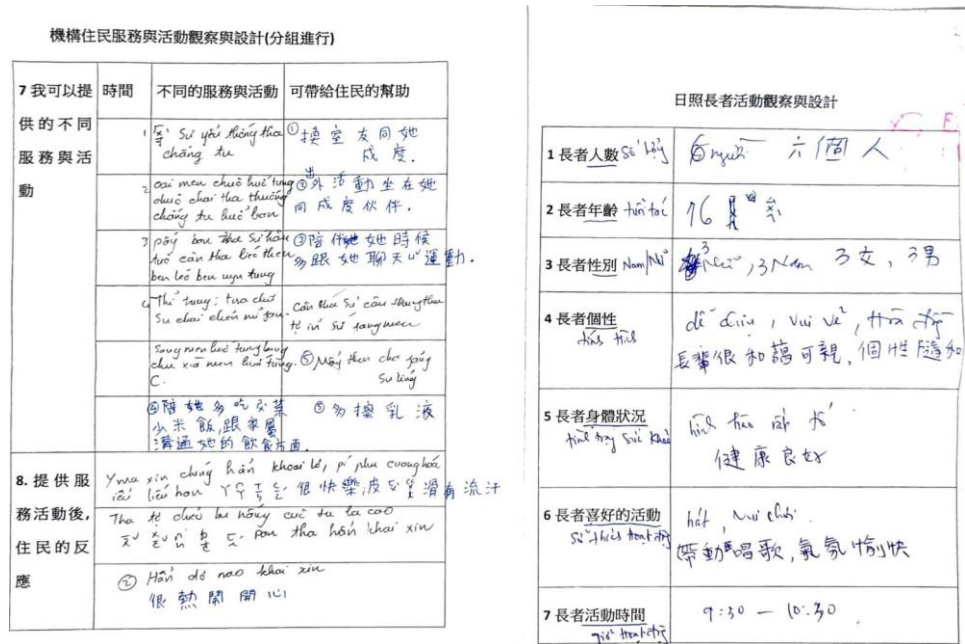


Figure 2. Trainees’ worksheets recoding their observation and reviews of the proposals. Worksheets of observation and reviews of implementing service proposals in convalescent centers (left) and in day care centers (right).

4.4.3. Trainees explored innovative care services through observing and empathizing with clients

The trainees who worked as CSAs after training became familiar with observing clients’ needs and making efforts to optimize their services by addressing these needs. As Fall explained, “During the pandemic, dwellers in the convalescent center could not meet their families often, and they felt exceptionally down. So, I paid special attention to their emotional well-being”. Another example was related by Amy, who observed her elderly female client, stating, “(The client) loves to be beautiful, so I help her with makeup and plan her outfits. She’s not into sports, so I encourage and coax her to engage in outdoor activities. She watches TV all the time, so I invite her to play cards, promoting her cognitive function”.

The trainees who worked as CSAs after training suggested that, by observing their colleagues and receiving feedback from clients, they had developed the courage to try to provide new services, which was influenced by the DT internship in which they participated during the training. As Ellen noted, “Now, I always observe the dietary needs of the clients. When I notice they’re tired of their daily meals, I come up with different meal preparation methods like guiding the clients to make dumplings or Vietnamese spring rolls with Taiwanese ingredients. Their appetites are stimulated. They expect my visits every day”. Meal preparation is often a challenge for immigrant female CSAs in Taiwan because they are less familiar with clients’ native cuisines, and there are significant variations in personal taste preferences. However, some of the trainees had expanded their services to include preparing meals for several clients because of gaining their clients’ trust. Jane, who was skilled at meal preparation, commented, “These creative services are uncommon among my colleagues, perhaps because they haven’t considered these services or because these services are too troublesome to try”.

4.4.4. Trainees developed a sense of accomplishment based on their workplace performance

The work performance of these immigrant female attendants elicited admiration from clients, clients' families, employers, and supervisors due to the meticulous, caring, and dedicated services provided by these immigrant female attendants. Ellen, who was a home CSA, received the following praise from a client, "Although you're not Taiwanese, you are as good as any Taiwanese. You truly care about clients' lives and always look for ways to improve our lives". Family members of clients also acknowledged the immigrant female attendants' exceptional caregiving, "(The son of a client) sometimes called me to discuss his parent's life and usually referred to his parent's appreciation of my dedicated and hardworking service", Jane noted.

At times, some trainees substituted for their colleagues at work. To their surprise, some clients even asked them to become official CSAs because of their excellence in their roles, which led to tension between these trainee CSAs and their colleagues. Moreover, due to their gaining the trust of their clients, these immigrant female CSAs could visit clients' homes unconstrainedly. Additionally, professional care services contributed to convalescent center dwellers' dependence on these female immigrant trainees; thus, when the trainee CSAs went on holidays, the dwellers felt a sense of loss.

Furthermore, the trainees gained a strong sense of achievement by caring for people. As Jane noted, "Observing my clients become healthier and greatly rely on me for care makes me feel a sense of accomplishment that I never experienced in my previous jobs. As an immigrant woman, earning the trust and recognition of Taiwanese people makes me feel remarkable".

In summary, the trainees in the program expressed high satisfaction with the training, developed proactive problem-solving capabilities with warmth and enthusiasm when providing care services, and exhibited a high rate of employment as CSAs. Upon entering the care service workforce, the trainees easily adapted to their roles due to their familiarity with the Taiwanese care service culture and their improved language literacy. They were committed to meeting clients' needs and innovating in their caregiving, ultimately earning clients' recognition and developing a sense of self-accomplishment. These findings highlight the excellent effectiveness of the CSA training based on CRP and DT for female immigrant women in Taiwan.

5. Discussion

In this study, immigrant female trainees who worked as CSAs after completing training exhibited positive cross-cultural competences by empathizing with clients' needs and actively integrating their native cuisine culture into the care they provided. Intercultural competences, which are based on one's self-cultural identity, result in not only empathy and multicultural thinking but also the ability to acknowledge and disseminate one's personal culture to others (Srivastava, 2023). These results of this study confirm the approaches adopted in this research, which focused first on enhancing individual self-cultural identity using CRP and subsequently on developing cross-cultural competencies through DT (Alfred, 2009; Kroeze and van de Grift, 2016). The convergence of these two approaches established a robust foundation for

the trainees' proactive cross-cultural literacy, thus increasing their confidence. In fact, cultivating cross-cultural competencies is an essential part of healthcare training and is associated with obvious benefits, such as improving CSAs' caregiving quality and personal job satisfaction (Samsi et al., 2018). However, it is worth noting that the development of cross-cultural competencies is relatively lacking in training programs targeting immigrant healthcare workers (Srivastava, 2023), particularly with regard to the application of DT in the field of education and training (Ferreira et al., 2020).

Furthermore, the trainees frequently referred to the following essential factors as beneficial for their training. First, during the training process, the establishment of a learning community, teamwork, and experience sharing enabled the trainees to establish a sisterhood. Additionally, the emphasis of the training on expression improved the trainees' written and oral communication skills. Also, during the internship, the instructors' gradual guidance allowed the trainees to overcome the challenges of adopting innovative delivery.

In fact, this emphasis on community building is especially crucial for immigrant women's learning, as it provides core emotional support, thus stabilizing their learning (Wu, 2014). Community building, which is one of the elements included in DT, has rarely been discussed in related studies, possibly because these studies have typically focused on nonimmigrant or nondisadvantaged learners that exhibited less reliance on communities (McLaughlin et al., 2019). Moreover, frequent discussions and expressions were found to enhance the trainees' oral and written communication skills, which may be especially important for immigrant female CSAs who must interact closely with clients, given that a lack of communication skills often hinders them from engaging in caregiving work (Hennebry and Walton-Roberts, 2019). However, this aspect of DT has rarely received academic attention.

Moreover, some studies on DT have emphasized the formation of interdisciplinary teams featuring members with high levels of professionalism, such as healthcare professionals and higher education students (e.g., Ferreir et al., 2020). However, the participants in this study were drawn from various low-skilled sectors, such as beauticians, framers, and hotel housekeepers. They were able to incorporate their original professionalism or culture into innovative service delivery in the DT internship programs, and their services were appreciated by their clients. This finding suggests that interdisciplinary members of DT teams may not be limited to highly skilled individuals; namely, the DT approach can also be applied to low-skilled individuals who aspire to be caregivers. However, in this study the frequent discussions, expressions, documentation, thinking, and problem-solving involved in the DT process posed significant challenges for these low-skilled immigrant female trainees. "We had rarely encountered this kind of training in our previous education or work experiences. Therefore, it was challenging and required significant effort to adapt to these new learning ways. Thankfully, we had instructors to guide us through observation and thinking and even to provide some ideas for reference. We followed the structured learning materials and instructors' direction step by step, making gradual progress", Amy noted. "Even though we are considered to be less educated and engage in less professional care work, we can still enhance our professionalism through these innovative training approaches", Fall said. Clearly, the DT training approach has value for low-skilled workers, whose opportunities for creative learning

may be limited. However, notably, implementing DT instruction for low-skilled or low-educated learners can be more time-consuming, thereby requiring additional time for such learners to become familiar with and engage in the innovative learning. Moreover, vocational training instructors must provide more structured and gradual guidance to ensure that learners benefit from this approach.

In this study, the immigrant female trainees who worked as CSAs after undergoing training enjoyed their caregiving work because they made efforts to satisfy those needs. Such attentive working attitudes made their work challenging yet rewarding. The trainees obtained their clients' trust and dependence in terms of their daily lives and emotions. As a result, caregiving work provided these trainees with a sense of accomplishment, confidence, mastery, and empowerment, which are rarely observed among Southeast Asian female immigrant caregivers in Taiwan (Wu, 2023). In fact, immigrant women often face discrimination due to their ethnicity and low social class. Additionally, the social construction of caregivers as low-skilled workers based on gender discrimination resulting from the undervaluing of women's unpaid care work contributes to the fact that female care workers are viewed as having a low social class (Romero, 2018). However, although empowering these immigrant women in their care work through the training based on CRP and DT may be a solution to the problem of labor market inequality, encouraging immigrant women to join the care sector may raise the issue of whether their employment in this sector enforces their workforce inequality and vulnerability (Hennebry and Walton-Roberts, 2019).

The CRP involved in the CSA training of this study emphasized the use of the caregiving cultures of trainees' hometowns as a bridge to understand and solidify their caregiving service learning by comparing the caregiving service cultures of Taiwan and those of their home countries. Indeed, healthcare services that are located in rich cultural contexts reflect a nation's economic development. Additionally, caregiving services exhibit both diversity and universality (Lan, 2010). Therefore, instructors must be cautious about using such a comparative approach with regard to the cultures and life experiences associated with the host country and the trainees' homelands. Although this comparative approach may foster trainees' self-respect and cultural understanding, it might lead to ethnic discrimination targeted at immigrant women because of these cultural differences (Wu, 2021).

Before conducting the CSA training in this study, the research team thoroughly cultivated instructors through short-term training. However, changes do not occur in a vacuum, and the transformation of instructors requires their practical application and continuous negotiation in a real context (Alfred, 2009). In the training based on CRP and DT, instructors must not only understand the trainees' complex life experiences but also incorporate these experiences into the curriculum. Additionally, instructors would possess cultural sensitivity and competence to identify their own culture, engage in cross-culture exchange and acquire empathy and creative thinking skills, which are essential for guiding disadvantaged trainees toward empowerment. These abilities, which would be reconstructed over a long time, are particularly important for vocational instructors who tend to emphasize professional technical expertise rather than the importance of humanistic competency (Wu, 2021).

6. Conclusions and limitations

The results of this study demonstrate the rich effectiveness of CSA training based on CRP and DT in enhancing the course satisfaction and CSA employment rates of Vietnamese and Indonesian female immigrants in Taiwan, especially amid the COVID-19 outbreak. Specifically, in addition to fundamental caregiving professionalism, this training equipped female immigrant trainees with proactive problem-solving attitudes. In the workplace, the immigrant women who worked as CSAs exhibited cultural competency and a strong commitment to continually innovating their service delivery. Their dedication elicited appreciation from clients and allowed the trainees to obtain empowerment. To our knowledge, this study represents the first application of CRP and DT in care service training in Taiwan, and it suggests a promising way of enhancing the workforce capacity of female immigrant CSAs. Additionally, this study reveals that the DT training approach has great value for low-skilled adult trainees, whose opportunities for innovative learning are limited.

Nonetheless, the CSA training based on CRP and DT outlined here represents a time-consuming challenge. Furthermore, the need for a clear structure within the training process is paramount when implementing training according to CRP and DT for low-skilled or less educated adult trainees. Additionally, instructors who possess competence in multicultural education and CT education are indispensable for effectively implementing this type of vocational training.

To create inclusive and effective training programs for empowering immigrant women in Taiwan and enhancing their employability, the integration of CSA training programs based on CRP and DT into national and local development policies is vital for their sustainable implementation. Specifically, a robust infrastructure is required, including the development of CSA training curricula that are culturally responsive to immigrant women's needs, the recruitment and training of instructors who are competent in multicultural education and DT, and the collaboration between government agencies, non-governmental organizations, and community groups for supporting immigrant women (Wu, 2021). Additionally, with the ongoing assessment of the effectiveness of these CSA programs, policymakers could make informed decisions to improve and expand CSA training initiatives, ensuring that they meet the evolving needs of female immigrants, enhance their workforce capacity, and facilitate the overall development of Taiwan's care service sector.

Some limitations of this study should be acknowledged. First, in this study, in-depth interviews were used to obtain the perspectives of the female immigrant trainees and trainers involved in this research. The feedback provided by clients regarding these female immigrant trainees' services may be different and thus warrants further investigation. Second, the evaluation of the program was based on short-term outcomes obtained directly after the training and after some months of program attendance; accordingly, long-term outcomes need further examination. This study only recruited a small number of immigrant women from Vietnam and Indonesia as the program trainees, so it may be necessary to have more female immigrant trainees involved in further investigation.

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