DESIGN WORKSHOPS IN THAILAND: DOCUMENTING PRACTICES AND RESEARCH ON THE PROMOTION OF "SOFT INTEGRATION" AMONG MULTI-ETHNIC COMMUNITIES

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Abstract: Research study is targeted towards design workshops in Thailand as a means for facilitating "soft integration" among multi-ethnic groups. Implementing a multi-method approach of participatory observation, in-depth interviews, and questionnaire surveys, this research study makes systematic investigations into design workshops in different parts of Thailand. The conclusions show that design workshops, as "soft" intervention, can promote intercultural communication, cultural identity, and social integration through three interrelated factors: cultural cohesion, collaborative design, and relational identity. This study not only enriches theoretical studies on multi-ethnic integration but also provides new conclusions and practical references to social governance innovation and cultural industry construction in areas inhabited by ethnical diversity. The "soft integration" model advocated in this research has important theoretical and practical value for explaining and fostering ethnic harmony in multicultural communities.
Keywords: Design workshops, Multi-ethnic communities, Soft integration, Thailand, Cultural identity, Co-creation

1 INTRODUCTION

1.1 Research Background and Problem Statement

With growing globalization, multi-ethnic countries are confronted with the challenge of preserving cultural diversity as well as ethnic integration and social harmony - a key theoretical and practical concern. Conventional approaches to ethnic integration have typically employed "top-down" policy instruments or economic incentives as "hard" policies. These have been moderately successful in some situations but also face difficulties in achieving real acceptance and long-term integration. In this regard, the "design workshops" (Design Workshop) organized in Thailand's multi-ethnic frontier regions represent a cultural "soft" approach towards increasing ethnic groups' cultural and psychological integration, which involves a new approach and methodology.

Thailand as a crossroads of Southeast Asia has complex ethnic composition and multilayered cultural richness. In recent years, the authority of Thailand started design workshop programs combining traditional handicraft with modern design, while, on the other hand, promoting traditional culture as well as allowing natural exchange and integration of ethnic groups. This new activity-based "soft integration" contrasts with traditional administrative mandating or economic incentives, and offers an alternative way for peaceful coexistence of multi-ethnic groups.

1.2 Research Importance

Theoretical importance of the research lies in the extension of the theoretical foundation of "multi-ethnic soft integration" by adding a model and feedback assessment system for "design-promoted soft integration" and both disclosing universal and specific aspects of design intervention for multi-ethnic communities. The research overcomes the absence of tangible research material on Thailand's "design workshop" activities through the provision of first-hand empirical data from participatory practice, observation, and interviews. Further, this research contributes to cross-disciplinary research methodology through the provision of a triangulation approach using narrative description and quantitative measurement to enhance the standardization and scientificity of "design-promoted soft integration" research.

In practice, the research provides a true database for ethnic art teaching design and policy comparison, realistic examples of art design implementation for "soft integration," and experiential references for ethnic work in our nation's new era.

1.3 Research Objectives and Content

This study aims to deeply investigate Thailand's design workshop project practice experience, elaborate on the role of participatory design in promoting grassroots governance innovation and multi-ethnic integration, and provide replicable experience and policy recommendations for the improvement of grassroots governance and cultural industry development in ethnic regions. Research content includes:
1.Systematic documentation of practices of Thailand's design workshop project to uncover their mechanisms and channels for enabling multi-ethnic "soft integration."

2.Formulation of a theoretical model of "design-fostered soft integration" and determination of its primary components and functioning processes.

3.Systematic evaluation of the role played by design workshops in multi-ethnic integration.

4.Examination of the feasibility of localizing the concept of the design workshop.

1.4 Research Methods and Innovations

The research applies diverse research methods, combining qualitative and quantitative models of analysis, including:

Participatory Observation Method: The research team actively engaged in the process of conducting Thailand's design workshop projects with intimate understanding of working procedures and real impacts by experiencing and observing firsthand.

Semi-standardized Interview Method: Interviewing multi-ethnic students who joined design workshops, project organizers, and local citizens in-depth to collect oral history materials.

Questionnaire Survey Approach: Designing questionnaire surveys to identify participants' sentiments and opinions on the projects, how the projects affect participants' cultural identity, social interaction, etc.

Case Analysis Approach: Selecting typical design workshop projects for close analysis to examine their unique practices and effectiveness in promoting multi-ethnic integration.

Analytic Hierarchy Process and Fuzzy Comprehensive Evaluation Method: Formulating a hierarchical model structure, acquiring effectiveness reviews and determining weights through questionnaires for analyzing the impacts of design workshop projects.

The research breakthroughs are best marked by: first conceptual proposal and rigorous definition of the term "soft integration"; development of a three-dimensional theoretical model for "design-promoted soft integration"; inter-disciplinary research approach creatively adapted; and offering firsthand empirical data on multi-ethnic integration through design workshops.

2 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Definition and Theoretical Origins of "Soft Integration"

"Soft integration" as a new phenomenon implies a middle-of-the-road, gradual, and non-forced form of ethnic interaction, exchange, and integration with "hard" policy intervention of the past. Etymologically, "soft" means adjustability, flexibility, and voluntary factors; "integration" addresses interaction, exchange, and interinfluence among plural ethnic groups towards ultimate harmonious coexistence.

The key meanings of "soft integration" might be deduced from the following factors:

Gentleness: Rather than coercive techniques such as administrative fiat or economic enticement, "soft integration" places greater reliance on the application of culture, art, education, and other soft tools in the establishment of natural integration milieus and spaces.

Bidirectionality: Far from one-way unidirectional assimilation or integration but cross-learning and cross-influence among ethnic groups with respect.

Subjectivity: Focus on autonomous involvement and proactive self-definition by ethnic groups as active actors and agents and not as passive recipients.

Processual Nature: Not a sudden result but a continuous, gradual dynamic process.

Multidimensionality: Integrating integration in economic, social, cultural, and psychological dimensions with particular emphasis on identification in cultural and psychological dimensions.

Design workshops, a new form of "soft integration," employ design exercises as a vehicle to create platforms for communication and exchange between different ethnic groups, enabling intersubjective understanding and identification between cultures, high typicality, and representativeness.

2.2 Theoretical Multi-ethnic Integration Research

Enabling research into multi‐ethnic integration is of imperative significance in our contemporary globalized world, in which plural ethnic populations inhabit public places, social institutions, and administrative structures. Shaping such research not only adds to our theoretical understanding of the processes of integration but also provides critical evidence to enable more inclusive, effective policy.

Most importantly, from Canadian studies, integration models have been complemented by a double focus on multicultural policies and the reinforcement of national narratives embracing diversity and pluralism. Wu and So [1] argue that Canada's peculiar approach—high naturalization rates and a narrative of mutual respect—has been central in constructing ethnic as well as national belonging. Simultaneously, comparative Canadian citizenship and immigration studies recognize the need for policy to integrate multiculturalism into broader frameworks of civic engagement and thus shed light on the multi-dimensional worth of research in this field [2, 3].

Internationally, city case studies provide further traction to sound research on multi‐ethnic integration. Liu and Mwanza [4] illustrate the differences in public attitudes and multicultural experiences across ethnic groups and suggest that the urban context itself is engaged in closing cultural gulfs or entrenching differences. Likewise, qualitative Hong Kong

data suggest regional multicultural practice variations need to be tackled through context-specific approaches that engage Chinese and non-Chinese communities [5]. These geographical and cultural analyses add further depth to our overall image of integration by allowing scholars to compare policy effect across national contexts and urban landscapes.

Multidisciplinary approaches are called for in a quest to harmonize at times competing goals for prejudice reduction and for activating active collective involvement. Urbiola et al.[6] provide a model that integrates prejudice reduction and collective action strategies through a multicultural commitment, which suggests that psychological factors are as vital as policy processes in facilitating effective integration. More so, Verkuyten [7] lays even more stress on the intragroup processes and cultural identity negotiation role in legitimating multicultural policies, thereby providing a critical counterpoint to those downplaying the importance of group processes.

Comparative European research offers further layers of sophistication by illustrating that the influence of multicultural policy on socio-administrative integration may be modest and conditional. Citrin et al. [8] and Bloemraad and Wright [9], for instance, illustrate that multicultural policies tend to foster modest levels of administrative inclusion and social cohesion but with variable success across countries. These findings provoke longitudinal and cross-national study designs to chart more precisely the interplay among dynamic state policy, civic participation, and cultural identity—a research agenda that might just as easily be pursued through mobilizing insight derived from scholarship that has critically examined multiculturalism's more diffuse impacts on society [10, 11].

In synthesis, evoking examination of multi-ethnic integration is not simply a matter of the experimentation of various policies but also one of forging a more refined relationship between theory and practice. These studies must draw on a variety of methodological approaches — from empirical quantitative information to qualitative research — to pose questions regarding the impact of integration policies on social inclusion, administrative engagement, and the daily lives of citizens in multiethnic society. The results that emerge from such efforts can ultimately guide policymakers towards the creation of interventions that are administratively viable and culturally attuned, thereby promoting unity in diversity across the globe.

2.3 Interdisciplinary Research of Design Studies and Ethnology

Interdisciplinary research spanning the domains of design studies and ethnological studies is emerging as a new frontier for theory building and applied innovation. The current research combines design studies' critical and creative approaches with the cultural, historical, and social understanding of the ethnological approach. With such a convergence, one can have a comprehensive approach that encompasses the diversity of human expression, social values, and material culture.

Among the most prominent of these traits of interdisciplinary research is knowledge sharing and design codification. Hamari et al.[12] demonstrate how systematic codification can be used to contribute towards enabling design research in interdisciplinary Design Science Research (DSR) projects. Their study points to the need for strong structures of knowledge management and communication to transform the artistic and functional design attributes into forms wherein ethnological measures of verification are possible. This points to the overall need for transdisciplinarity, as discussed in research appraisal studies that necessitated the implementation of interdisciplinarity standards for striking a balance between traditional barriers and preventing the disregard of disciplinary diversity [13].

Furthermore, methodological problems with study design are the most challenging at the integration of design studies and ethnology. Tobi and Kampen [14] suggest a general scheme of interdisciplinary studies considering both the design process and subsequent design outcomes. Their own model, design-oriented inquiry aside, can, however, be applied in the case of ethnological studies through a systematic study of cultural artifact, rituals, and customary practices. This app extends design practice by situating design methodologies within a broader context of social practice and cultural storying.

Furthermore, Chou and Wong [15] provide compelling proof for an integrative path which transforms design study from a discrete artefactual focus to an interdisciplinary collaboration one. They indicate that through bringing together design and cultural studies' methods, research can tackle sophisticated socio-cultural problems in a fresh way. The transformation enhances the depth of design research and enables ethnologists to apply design imagination in the re-interpretation of cultural reality.

Aside from these texts, Ciuccarelli [16] is writing about creating technological and conceptual tools—what he calls a "design macroscope"—intentionally made to advance interdisciplinary design research. The tools aim to make the conceptual foundations of design understandable in a common language where the design theories can dialogue with ethnographic perspectives. The tools are essential in ensuring that the design core is not truncated while operating with other disciplines, including ethnology.

Ethnology entails immense knowledge of human society's cultural phenomena. Gogora [17] considers digital curation of ethnology research reports, explaining how to create digital collections of studies documenting a wide variety of cultural practices and expressions. Methodologies introduced in his book offer significant directions for the syncretism of ethnology's analytical and archival paradigms with the newly emerging design studies approaches. Utilizing digital tools and platforms, researchers can produce multidisciplinary collections that are reservoirs of design innovation and ethnological knowledge, promoting a more inclusive set of research outputs.

Generally speaking, interdisciplinarity and the merging of design studies and ethnology bring forth a promising horizon for integrated knowledge about cultural innovation and human creativity. Through access to methodological innovation in codification and research design methods [12,14], fostering integrative methods that bridge disciplines [15], and adopting digital curation practices for the management of ethnological data [17], researchers can construct healthy models that not only go beyond traditional methodological limitations but also catalyze revolutionary change in both fields [13]. More research on such integrative processes is essential in addressing complicated social issues and establishing new patterns of cooperation among different research fields.
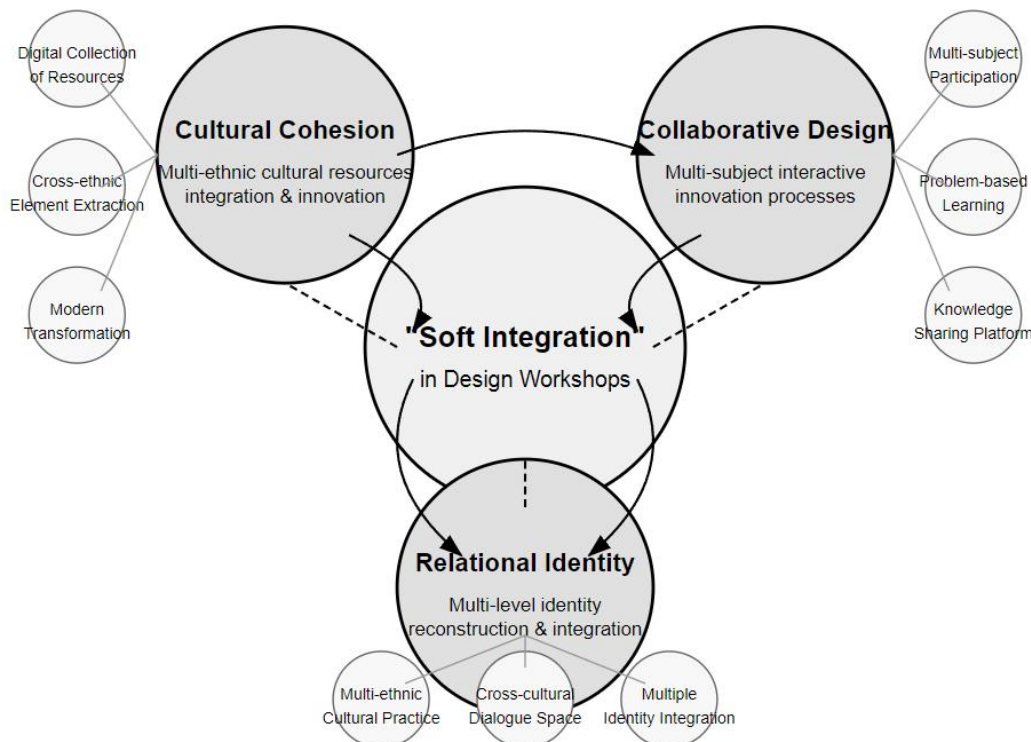
2.4 Theoretical Analysis Framework

Based on existing theories, the study formulates a three-dimensional model of "design-promoted soft integration" with reference to existing theories, investigating the process of design workshops to promote multi-ethnic integration from three dimensions: cultural bonding, cooperative design, and relational identity

Dimension of Cultural Cohesion: Focusing on the integration and innovation of cross-ethnic cultural resources, including traditional cultural resource collection and organization, cross-ethnic cultural element extraction and reconstruction, and cross-ethnic cultural symbol modern transformation and innovative expression.

Dimension of Collaborative Design: Focusing on the interactive innovation process of multiple subjects, including collaborative participation mechanism of multiple subjects, problem-oriented practical learning processes, and setting up knowledge-sharing and technological interaction platforms.

Relational Identity Dimension: Focusing on reconstruction and integration of multi-level identities, i.e., community cultural practices like multi-ethnic participation, establishing cross-cultural dialogue spaces, multiple identity reconstruction and integration.

Figure 1 Three-Dimensional Model of "Soft Integration"

These three dimensions are mutually enabling and interdependent to each other, forming an interactive system, as shown in figure 1. Collaborative design provides content foundation for collaborative design, and cultural cohesion provides operative tools to collaborative design. They enable each other to form relational identity, thus strengthening collaborative design and cultural cohesion reciprocally to form a virtuous circle.

3 DOCUMENTATION OF THAILAND'S DESIGN WORKSHOP PROJECTS

3.1 Overview of Thailand's Multi-ethnic Background and Integration Policies

Thailand is multi-ethnic. Thai people make up about 75% of the population, but there are numerous minority ethnic groups distributed throughout the country, and thus a multi-ethnic mosaic is formed. Major minority ethnic groups include: northern Thai mountain tribes such as Hmong, Yao, Karen, Lisu, Lahu, Akha, etc. (collectively referred to as

"Hill Tribes"); Malay Muslims in southern Thailand; and Chinese, Laotian, and Khmer communities distributed all over the country.

The Thai ethnic policy has changed from "assimilation" to "unity in diversity." In the early to mid-20th century, the Thai authority enforced mainly assimilation policies, emphasizing the establishment of a single "Thai identity". In the 1960s and 1970s, with opium production and administrative security issues in mountain areas, the authority began to pay attention to the emergence of ethnic groups in mountains, but still continued to seek assimilation and domination.

Since the 1980s, Thailand's ethnic policy has developed step by step towards a more inclusive "unity in diversity" policy. The 1997 Thai Constitution first guaranteed the cultural rights of ethnic minorities for the first time, legally safeguarding multi-cultural development. Since the 2000s, the Thai authority has actively promoted the concept of "One Thailand, Diverse Cultures," emphasizing respect for cultural diversity as well as national unity.

Under such circumstances, design workshops are increasingly a new trend to enable "soft integration" between multi-ethnic communities. Design workshops conceptually aim at merging modern design concepts with folk craftsmanship by requiring designers to collaborate with artisans in an effort to design innovative traditional craftsmanship products, make them market-competitive, and inherit and conserve cultural legacy. Of greater importance, design workshops provide a platform for communication and collaboration between designers and craftsmen with different ethnic backgrounds and generate mutual recognition and understanding through the co-creative process to achieve "soft integration".

3.2 Case Analysis of Bamboo Weaving Craft Community in Yasothon Province

Yasothon Province in northeast Thailand's Isan region is a major production base for handicrafts of traditional bamboo weaving. It is made up of a multi-ethnic population with mainly Thai, Lao, and Khmer individuals, forming a unique type of multi-ethnic integration through the development of history over time.

3.2.1 Background of Fa Huan Village design workshop project
Fa Huan Village, located in north Yasothon Province, is a multi-ethnic mixed village with Thai, Lao, and limited Khmer residents. The village has a historical tradition of bamboo weaving crafts but has more recently faced issues of market reduction, emigration of the youth population, and loss of skills. In 2019, with the support of the Yasothon Provincial Cultural Bureau, the village started the "Bamboo Weaving Innovation Design Workshop" project, which aims to revive traditional crafts via design innovation, develop multi-ethnic integration, and boost rural revitalization.

Particular project objectives were: (1) conservation and inheritance of ancient bamboo weaving arts; (2) enhancement of product added value by design innovation; (3) building of local design capabilities; (4) promotion of multi-ethnic cultural exchange and integration; and (5) establishment of a sustainable model of community development.

3.2.2 Organizational form and operational model
Fa Huan Village's design workshop was of the form of "1+3+N": 1 core staff, 3 professional teams, and N workshops.

The core group consisted of members of the village committee, local cultural leaders of the community, and external professional consultants, responsible for overall project planning and coordination. For maintaining equal representation of a number of ethnic groups, the structure of the core group carefully considered ethnic representation, which included representatives from Thai, Lao, and Khmer groups.

The three professional teams were design R&D team, skills inheritance team, and marketing team. The design R&D team consisted of external designers and local craftsmen, responsible for product innovation design; the skills inheritance team consisted of three-generation artisans (old, middle-aged, and young), responsible for passing on skills and nurturing talents; the marketing team was responsible for product exhibition, brand building, and sales channels.

The N workshops were the tangible working units of the project, and each workshop implemented activities on some themes or skills. For example, traditional pattern workshops, modern home product design workshops, bamboo dyeing workshops, etc. Workshops were operated in an open manner, and villagers were free to participate according to their interest and time.

The process of the design workshop was a "learning-creation-display-feedback" mode cycle: learning initially through inheritance of skills and workshops on design thinking; creating subsequently under the guidance of designers; then performing activities of work display; and finally receiving feedback from all directions in order to make adjustments to the content of the next round of learning and creation.

3.2.3 Participating subjects and interaction mechanisms
The objects of Fa Huan Village's design workshop were multi-level, mainly composed of: local artisans, professional designers, local residents, authority officials, and market operators. To enable smooth interaction among workshop subjects, the workshop established multi-level interaction mechanisms:

"Apprenticeship" interaction: Mature artisans with accompanying young apprentices, realizing skills inheritance through one-on-one guidance.

"Co-creation meeting" interaction: Periodic meetings for consultation where craftsmen and designers from different ethnic backgrounds jointly sought creative solutions.

"Cross-border combination" interaction: Building teams of members of different professional backgrounds and ethnic groups to fulfill certain projects cooperatively.

"Cultural salon" interaction: Intensifying cross-ethnic mutual understanding and friendship by sharing history, tradition, and eating foods, etc.

"Market docking" interaction: Inviting market players periodically for workshop participation and giving market demand information and feedback.

3.2.4 Design innovation achievements and ethnic integration effects

After three years of innovation, the design workshop of Fa Huan Village created abundant results: nearly 50 new products were made, 15 of which were bestsellers at the market; design innovation contributed 2-5 times product prices, significantly increasing artisan income; sales channels of products enlarged from local traditional markets to luxury malls and cross-border e-commerce platforms; products of the workshop won the "Best Cultural Innovation Award" during the 2021 Bangkok Design Week, enhancing brand popularity.

In terms of the promotion of ethnic integration, the design workshop also had deep impacts: workshop processes changed the interaction between participants from different ethnic groups from "frequent meetings" to "ongoing collaboration"; frequency of interaction was raised about three times a day; participants' perception of other ethnic groups as culture went from surface customs to values and aesthetic appreciation; other ethnic groups' traditional patterns, skills, and stories became accessible resources shared in the workshop; participants established emotional connections and trust relationships beyond ethnicities through co-design; participants maintained their original ethnic identities but, in parallel, an "artisan community" identity built on interests and common values.

3.3 Case of Design Workshops in Muslim Communities of Southern Thailand

Southern Thailand, especially the Pattani, Yala, Narathiwat, and Satun provinces, is controlled by Muslim Malay groups that have enormous disparities with the rest of Thailand in ethnicity, language, religion, and culture. The region has a long tradition of ethnic strife and separatism, which has posed enormous obstacles to local development and ethnic relations.

3.3.1 Project background and design

The research team conducted field research on the "Tradition and Modernity: Muslim Textile Design Workshop" project in Pattani Province, a collaborative ethnic integration project of the Thai Ministry of Culture and the Pattani Community Development Foundation. The project aimed to promote cultural exchange and economic relationships between Muslim Malays and other ethnic groups through design workshops to reduce ethnic tensions.

The design of the project integrated several essential features: Firstly, respect for cultural differences was infused, as respect for each ethnic group's religious beliefs and cultural characteristics was upheld as a basic principle by the project team; secondly, the project also emphasized balance of interest, such that each participant party could enjoy equitable returns in the cooperation process; thirdly, the project particularly emphasized emphasizing the distinctness and superiority of Muslim Malay culture as a differentiator in products; fourthly, the project emphasized the concept of co-creation, wherein all participants were objects of creation rather than passive recipients.

3.3.2 Innovative integration of religion and modern design

Another interesting feature of the Pattani design workshop was the innovative synthesis of Islamic cultural values and modern design. The synthesis honored religious rituals and integrated contemporary market demands to create unique cultural products.

The principal creative syntheses were realized in: integrating customary Islamic geometric motifs and calligraphy designs with contemporary graphic art; adding contemporary cutting and colors while upholding Muslim attire requirements; integrating customary handloom weaving, batik, and other artisanal crafts with contemporary materials; creating items complying with contemporary ways of life from customary crafts and cultural elements.

3.3.3 Successful experiences and challenges

The project had positive impacts in different aspects: Economically, the community products participating in the project increased by 80%, with 30-50% increase in income; socially, the rate of interaction between ethnic groups increased by more than three times, with significantly enhanced community cohesion; culturally, traditional craftsmanship was conserved and creatively cultivated, with more respect for traditional culture among the young generation.

However, the project wasn't without problem: Security concerns were the most important problem working in the area; due to geographical unaccessibility and ambient social considerations, products had heavy logistics costs and information asymmetry when marketing at home and foreign markets; some design innovations would unintentionally cross religious taboos or cultural sensitivities and become contentious; with the lapse of external sponsorship, the project's viability was compromised.

3.4 Design Workshop Practices in the OTOP (One Tambon One Product) Program

The "One Tambon One Product" (OTOP) program is a major local economic development policy launched by the Thai authority in 2001, aimed at encouraging each township community to develop products of local characteristics, enhance product quality and brand value through authority promotion and market operation, and stimulate local economic growth.

3.4.1 Positioning and functions of design workshops in OTOP

When the OTOP program evolved, classical product support frameworks gradually showed their limitations. In an effort to break such roadblocks, design workshops were incorporated into the OTOP program around 2010 as a novel type of assistance, acting as a strong nexus connecting traditional craftsmanship and modern-day markets.

Design workshops play multiple roles in the OTOP program: as a platform for innovation, injecting new ideas and dynamism into old handicrafts using modern design principles; as a center for capacity building in design, increasing the design awareness and technical skill of artisans through structured training and practice; as a cultural exchange center, uniting designers and artisans from different ethnic groups and regions to stimulate cross-cultural understanding; as a window to markets, involving designers, distributors, and consumers in product development; and as a vehicle for community organization, increasing community solidarity and self-governance ability.

3.4.2 "Young OTOP" One Village One Product Youth Force Workshop

With the progress of the OTOP program, the biggest problem was that the younger generation did not participate, and traditional crafts were about to be lost because of the problem of inheritance. In view of this problem, the Thai authority launched the Young OTOP "One Village One Product Youth Force Workshop" project in 2018 in the hope that young people would participate in the innovative development of traditional crafts.

Young OTOP workshop of Chiang Mai Province studied by the research team employed several new methods: in conforming to the "youth-led" principle with major participants between the ages of 18-35 years; applying a "master-apprentice combination" cultivation mode to promote a learning community with merits of three generations in a complement; giving top priority to "digital empowerment," which involved several digital technologies to act as assistants to design and marketing; providing whole-rounded "entrepreneurial support" to help young people realize their entrepreneurial dreams; and providing an active "social network" environment to meet the social demands and sense of belonging of young people.

3.4.3 Multi-ethnic participation features and effect evaluation

OTOP design workshops in multi-ethnic locations exhibited some unique participation characteristics: natural attainment of ethnic integration, with workshop participants usually from different ethnic groups but with common work targets and creativity enthusiasm across ethnic divisions; systematic practice of cultural respect, with traditional components and aesthetic preferences of each ethnic group valued and internalized; interactive exchange of skill acquisition, with skill techniques among different ethnic groups mutually learned, referenced, and incorporated in the workshop; successful establishment of benefit-sharing arrangements, with workshop returns often shared on a contribution basis regardless of ethnicity; and step-by-step integration of identity recognition, with participants increasingly bonding over common identity based on artisan status yet retaining their respective ethnic identities.

Effect evaluation proved that design workshops initiated successful impacts in the economic, social, and cultural fields: Economically, products of the involved communities are 2-3 times higher in average price, sales range expansion, and income of the participants is increased by 30-50%; socially, survey data indicated considerably enhanced social cohesion, where frequency of inter-ethnic relations increased more than three-fold, and considerably higher willingness to act as one in communal affairs; culturally, traditional craft was saved and innovatively enhanced, with further enhanced consciousness of traditional culture among the young generation, and innovative modes of new cultural expression initiated through new combination of diverse ethnic cultural factors.

4 ANALYSIS OF THE MECHANISMS OF DESIGN WORKSHOPS IN PROMOTING MULTI-ETHNIC "SOFT INTEGRATION"

4.1 Cultural Cohesion: Integration and Innovation of Multi-ethnic Cultural Resources

The primary dimension in which "design workshops" enable multi-ethnic integration is cultural cohesion. It builds inclusive cultural forms by excavating, integrating, and innovating multi-ethnic cultural resources and enables recognition and resonance at the cultural level among different ethnic groups.

4.1.1 Digital collection and organization of traditional cultural resources

The principal task of "design workshop" projects is the structured collection and sorting of conventional cultural material of various ethnic groups. It is not simply a collation of material but a structured sorting and preservation of conventional culture with the aid of advanced digital technology, serving as a foundation for subsequent design innovation.

Employees in northern Thailand worked in Chiang Mai Province to conduct a close-up study of mountain tribes' traditional textile arts in the area, collecting not only examples of traditional fabrics but also photographing traditional techniques, pattern characteristics, and color codes with high-definition cameras and 3D scanning. The digital content collected was indexed into a database of searchable terms by designers and artisans.

The greatest advantages of digital collection are: breaking geographical barriers, making it possible to organize and share dispersed cultural resources in different locations centrally; accurately documenting the information of traditional crafts, ensuring the proper transmission of craft techniques; and facilitating systematic analysis, helping to discover commonalities and interconnections between cultures of different ethnic groups.

4.1.2 Extraction and reconstruction of cross-ethnic cultural elements

As per the compiled cultural sources, "design workshops" disassemble and simplify the key constituents of various ethnic groups' cultures and reconstitute them creatively. It is not just a collage amalgam but rather an exploration for universals and points of connection on the grounds of an abysmal realization of the cultural undertones of every ethnic group and creating new expressions of culture that can appeal to multiple ethnic groups.

In Loei Province of northeastern Thailand, the project team observed and compared traditional patterns of the local Thai, Lao, and Khmer ethnic groups and found that all three ethnic groups employed diamond geometric patterns in

their design despite significant differences in language and lifestyles. Based on this discovery, designers extracted common elements of diamond patterns from the three ethnic groups and created a "Three-Tribe Diamond Pattern" that maintained the attributes of each ethnic group but could be commonly recognized by all three.

This extraction and reconstruction of cross-ethnic cultural elements honor the uniqueness of each ethnic group's culture while identifying the interconnections and commonalities among ethnic cultures.

4.1.3 Contemporary innovation and innovative expression of multi-ethnic cultural symbols

The third significant linkage in "design workshops" is to transform traditional cultural symbols into innovative expressions with contemporary aesthetics and uses. Such transformation is not such copying of traditions but enriching new contemporary meanings and forms of expression on the basis of understanding the spiritual essence of traditional culture.

In Phetchaburi Province in central Thailand, designers collaborated with local Chinese and Thai craftsmen to employ traditional woodcarving patterns in modern home product designs. Designers followed classic pattern structure and proportion but reduced intricate details for modern minimalist styles; while also altering product form to allow for classic patterns to be adapted for the needs of modern lifestyles. This innovation not only added value to products in the market but also allowed traditional cultural elements to blend with modern life and remain vibrant.

For instance, in a "design workshop" project in Chiang Mai, designers collaborated with Akha and Lahu tribe weavers to combine and contrast traditional textile crafts and modern fashion design. Those era designers honored earlier skills but paved new ways with color selection and style design, having their products retain ethnic qualities while fitting modern fashion sensibilities. Such a design was not only accepted at the national market but also gained entry into global fashion, which became an important aspect of Thai cultural "soft power."

The innovation and fresh representation of symbols of multi-ethnic culture lead traditional culture to enter the framework of modern society with an open mind and progressive mentality and have an impact upon a wider area. Innovation serves not only to protect cultural heritage but also gives a new driving force to culture and helps propagate and carry on culture in new places.

4.2 Interactive Innovation Process by Collaborative Design: Multi-subject Participation

The second most essential element of "design workshops" in promoting multi-ethnic integration is collaborative design, which can stimulate deep communication and collaboration among various ethnic groups and various groups through the generation of an interactive process of innovation with multi-subject participation and attaining complementation and integration of knowledge and skills.

4.2.1 Collaborative participation mechanism of multiple subjects

One of the key features of "design workshop" projects is establishing a system of participatory collaboration for different subjects, allowing people from different backgrounds, different professions, and different ethnic groups to collaborate with one another through equal conversation. This participatory collaboration is not merely a division of labor and cooperation but is centered on interactive synthesis of knowledge, skills, and perspectives.

For Thailand's "design workshop" programs, the subject involved typically consists of four groups: representatives of authority departments, primarily accountable for policy leading and coordinating funds; professional researchers and designers, providing design suggestions and technical advice; ethnic minority artisans and culture inheritors, possessing traditional crafts skills and knowledge of culture; and market and community members, providing information regarding consumer demand and community response.

These issues form a natural cooperation team in the "design workshop." Taking a project example in northern Thailand's Chiang Mai Province, the authority department of culture arranged venue and facility assistance and oversaw the involvement of different ethnic groups; Chiang Mai University gave design idea and approach guidance; Akha, Lahu, and Lahu tribe artisans provided inherited skill and ethnical knowledge; and local handicraft vendors and tourism association members provided market demand information. These subjects were not independent of one another but evolved close interactional associations.

The mutual co-participation mechanism of different subjects possesses several key merits: it demolishes the traditional knowledge authority mechanism, with different types of knowledge and capabilities discussing on a common platform; it promotes cross-professional and cross-cultural exchange and learning, widening the vision and capacity of both sides; and it provides a multiple voices' accommodatable negotiation mechanism, reinforcing the recognition sense and belonging feeling of all sides to the result.

4.2.2 Problem-based practical learning process

The second feature of "design workshops" is the application of practical learning processes on real problems to promote mutual learning and synthesis of knowledge and skills through the solution of specific design problems. It is not theoretical abstract instruction but learning through experience in solving practical problems.

At Songkhla Province in southern Thailand, a "design workshop" project gathered local Thai, Malay, and Chinese designers and artisans together to collaborate in solving the basic question of "how to make traditional handicrafts compatible with modern life." The workshop was divided into four stages: first, problem analysis, in which all concerned sat together and brainstormed the market problems facing traditional handicrafts; second, resource inventory, clarifying the traditional skills and material resources of each ethnic group; third, creative divergence, brainstorming and design games to generate various possible solutions; and finally, prototype making, developing the most promising ideas into actual product prototypes.

By this method, students learned specific design procedures and techniques but more importantly learned how to engage in cross-cultural, cross-professional collaborative problem-solving. Problem-based learning has various advantages: an emphasis on realistic problems, aligning learning to be goal-focused and directly translatable; prioritizing "learning by doing," promoting knowledge internalization and achievement of skills based on personal experience; and establishing a risk-free setting for exploration and experimentation, challenging participants to experiment and innovate boldly.

4.2.3 Establishing knowledge sharing and technical interaction platforms

"Design workshops" are not only sporadic innovation activities but also resolute to build long-term knowledge sharing and technical interaction platforms in order to achieve continuous exchange and cooperation between different ethnic groups and between different professions. These platforms both possess physical locations and digital networks, becoming multi-level channels of knowledge flow.

In Thailand's Nong Khai Province in the northeast, the "design workshop" activity left a "Creative Exchange Center" after the event ended. The center is both training and exhibition venue and exchange space. The center regularly holds craft exhibitions, technical training, and design sharing, attracting artisans and designers from ethnic groups. The center has also established material libraries and tool libraries, facilitating the ease of design experiments and technical exchanges among the participants.

Apart from physical locations, "design workshop" projects have also established digitalized knowledge exchange platforms. In Ayutthaya Province in central Thailand, the project team developed a mobile app with craft tutorials, design cases, and market information, enabling artisans and designers from all regions to learn and share information at any time.

These knowledge sharing and technical interaction spaces possess several core values: transcending time and space limitations, making knowledge and technology flow and diffuse more widely; promoting continuous learning and innovation, making the impact of "design workshops" longer than the project period; and creating cross-cultural and cross-professional innovation communities, establishing a basis for long-term multi-ethnic exchange and cooperation.

4.3 Relational Identity: Reconstruction and Integration of Multi-level Identities

The third most significant dimension of "design workshops" in enabling multi-ethnic integration is relational identity, which compels participants to redesign and reconsider relationships with other individuals on the basis of common creative practices to develop more inclusive recognition of identity.

4.3.1 Multi-ethnic participating community cultural practices

In "design workshops," local multi-ethnic cultural practices are a vital foundation for relational identity construction. They are not technical collaborations but also cultural co-productions, strengthening emotional bonds and recognition of identity through shared experience and product.

In northern Thailand's Nan Province, a "design workshop" program brought together local Tai, Yao, and Hmong communities to collaborate in collective innovative design of traditional clothing. The project adopted a "collective creation" approach, forming mixed crews of artists from the three ethnic groups, and each crew must consist of members from a minimum of three ethnic groups. The crew members needed to learn one another's traditional skills and jointly create costume designs that incorporated cultural elements from the three tribes. During the period of two-month production, artists from different ethnic groups not only exchanged techniques but also their narratives and life experiences.

After the completion of the project, members held a "Three-Tribe Costume Exhibition" showcasing the works they jointly created. The works retained both the traditional characteristics of each ethnic group and symbolized innovative integration elements, and therefore served as important roles as carriers of facilitating the three-tribe cultural exchange. More importantly, members established emotional connections and memories by going through this co-creation and exhibition process, beyond ethnic boundaries.

Such multi-ethnic community cultural practice has some outstanding characteristics: emphasizing the importance of "doing together," enabling mutual understanding and recognition through simultaneous practical actions; cultivating shared cultural symbols and memories as bearers of emotional connections between ethnic groups; and emphasizing the potential to construct a common culture but value cultural differences, providing a practical path for multi-ethnic integration.

4.3.2 Construction of cross-cultural dialogue spaces

"Design workshops" generate a setting for cross-cultural conversation through specific spatial arrangement and interactive configurations so that the participants from different ethnic groups can have rich dialogue in a fair, open environment. Such dialogue encompasses not just design and technology but also more general issues such as values, worldview, and recognition of identity.

In southern Thailand's Ranong Province, the "design workshop" project deliberately chose a market commonly utilized by multiple ethnic groups as the activity site. The location did not have any cultural affiliation to any ethnic group, and therefore it was a common ground for even discussion. The project team also created a dialogue environment by planning space and activity: work tables were set in a circular arrangement, disrupting the usual teaching configuration; material and tool spaces were made available to everyone without usage restriction; and various informal exchange periods were introduced in the activity process, offering chances for natural conversation.

The project also arranged a series of cross-cultural conversation activities. For example, "Cultural Story Sharing Sessions" invited various ethnic groups to visit and share their own experiences and cultural practices of handicrafts;

"Value Discussions" encouraged participants to exchange dialogue on such topics as "what is good design" and "what is valuable handicraft," in which values from various cultural backgrounds collided and merged with each other through discussion.

This intercultural conversation space has several significant characteristics: it is a "third space" neither completely owned by any one cultural heritage nor capable of containing multiple cultural expression; it values the equality and reciprocity of conversation, so everyone can get a turn to speak and be heard; and it can contain the co-presence of numerous voices, eschewing reduction to some monolithic consensus but promoting understanding and appreciation of diversity.

4.3.3 Integration and reconstruction of multiple identities

Through "design workshops," the participants experienced transformation and reconstruction in identity recognition, developing more complex and diversified identity recognition. This identity reconstruction is not discarding original identities but building more inclusive multiple identities with the preservation of ethnic cultural recognition.

In northeastern Thailand's Loei Province, the research team conducted in-depth interviews with those artisans who worked on the "design workshop" project for two years and found that their recognition of identity has evolved subtly but profoundly. One Lao artisan spoke about how, before she worked with the project, she only defined herself ethnically as Lao and kept a certain distance from Thai and Khmer individuals; but after extended cooperation with workers of other ethnic groups, she developed new compound identity acknowledgment—she is not only an inheritor of old Lao traditional skills but also a representation of "Northeastern Thailand Handicrafts" regional culture, and an "innovative designer" connecting tradition and modernity.

The project also facilitated the expansion of participants' "we" concept. Based on questionnaire surveys, before the project participants would only quote their respective ethnic groups when they spoke of "we," but after the project, the "we" target expanded to multi-ethnic groups who worked on the project together, and even to the entire regional community. Such expansion of collective identity implies that collaborative creative processes can foster the formation of recognition of identity across ethnic boundaries.

Most striking is that this coming together of several identities is not a negation of the original ethnic identity but an extension and enrichment of identity meanings. Participants tended to maintain consciousness and pride of their own ethnic cultures and evolved multicultural identities that could communicate and understand with one another across cultural boundaries.

4.4 Innovative Mechanism of "Design Workshops" Facilitating Multi-ethnic "Soft Integration"

The three major dimensions of "design workshops" that cause multi-ethnic "soft integration" - cultural cohesion, cooperative design, and relational identity - are not separate but integrated as a system of inter-relationship and support, as shown in figure 2.
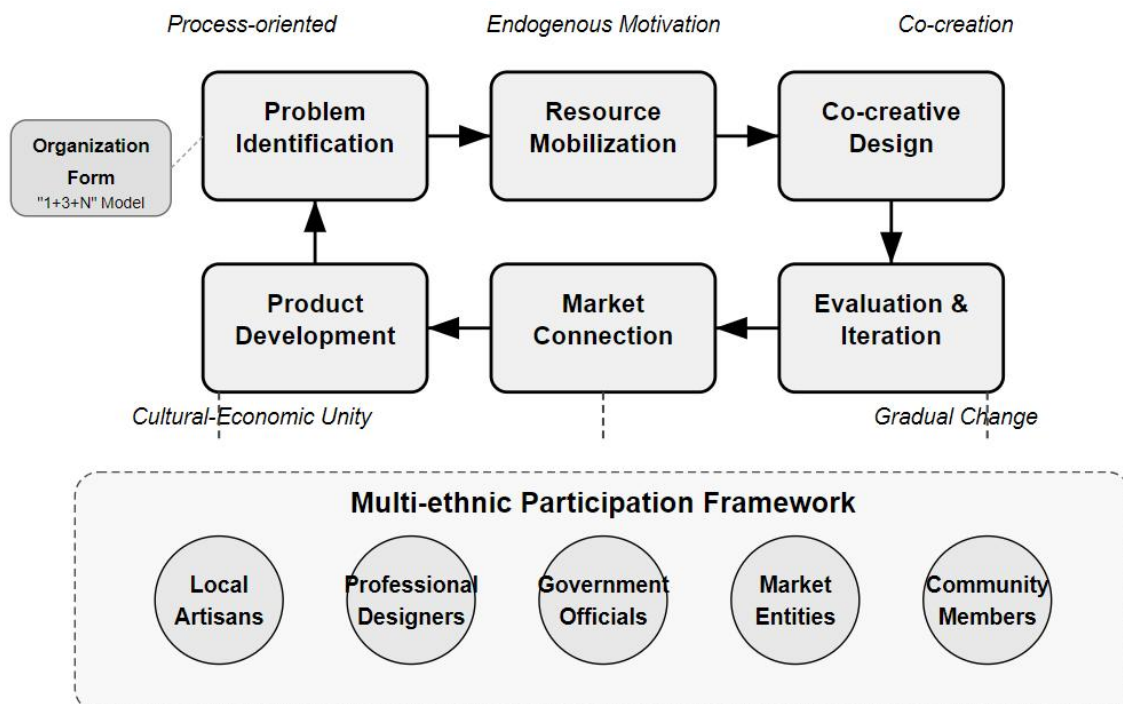

Figure 2 Three-Dimensional Model of "Soft Integration"

4.4.1 Three-dimensional interactive relationship analysis

There are close interactive relationships among the three dimensions of cultural cohesion, cooperative design, and relational identity to constitute an interactive dynamic system.

First of all, cultural integration provides the content foundation for cooperative design. The integration and creation of multi-ethnic cultural resources provide rich cultural elements and creative sources for cooperative design. Without being provided by this integration and creation of cultural resources, cooperative design would lack cultural depth and ethnic characteristics.

Second, collaborative design provides efficient solutions to cultural cohesion. The multi-subject innovation process of interactivity provides certain efficient ways for integrating and innovating cultural resources. Such methodological support makes cultural cohesion not only a theoretical idea but an applied practical procedure.

Thirdly, cultural coherence and collaborative design mutually reinforce the building of relational identity. The integration of multi-ethnic cultural resources emphasizes points of connection and commonalities between different ethnic cultures, grounding a cultural foundation for relational identity; while the interactive innovation process with multi-subject involvement builds social conditions and practical spaces for relationship formation.

Finally, the building of relational identity in return reinforces the fortification of cultural coherence and collaborative design. When the participants develop relational identity transcending ethnic borders, they become more willing to pass on their cultural knowledge and skills and open to accepting influence from other cultures, hence cultural cohesion develops towards higher levels; at the same time, cooperation willingness and trust are enhanced with relational identity, so the cooperative design process runs more smoothly and efficiently.

This three-way interaction generates a virtuous circle: cultural cohesion provides content roots, collaborative design provides working practices, and they both generate relational identity, which in turn reinforces increasing cultural cohesion and collaborative design. This is not a linear process but a spiraling process of development, with each of the three dimensions mutually reinforced and enriched as interaction deepens.

4.4.2 Features and values of the "Soft Integration" mechanism

As a vehicle of multi-ethnic "soft integration," "design workshops" exhibit a certain shared set of characteristic features and virtues that make it a viable avenue for ethnic integration.

First of all, "design workshops" are more process than outcome focused. As opposed to typical policy measures, "design workshops" do not emphasize the achievement of ethnic integration as such but focus on creating conditions under which integration occurs naturally. Being more process-focused thus circumvents administrative opposition, and participants may create relations in a relatively relaxed setting.

Second, "design workshops" promote endogenous rather than external motivation. "Design workshops" promote ethnic exchange and integration by stimulating participants' intrinsic drives such as the desire to create, to learn, and to cooperate. This endogenous motivation guarantees a more natural and enduring integration process.

Third, "design workshops" are more co-creative than instillation. "Design workshops" demolish the age-old one-way knowledge-transmission paradigm, bringing into prominence co-creation and shared participation across multiple subjects. This framework of co-creation is dignifying of the value and subjectivity of all, intensifying feelings of belongingness and participation.

Fourth, "design workshops" emphasize the combination of cultural value and economic value. "Design workshops" organically combine cultural protection and economic development. Traditional cultural resources are transformed into marketable goods through design innovation, achieving a win-win result of cultural inheritance and economic development.

Finally, "design workshops" emphasize gradual change rather than sudden change. "Design workshops" recognize that ethnic integration is a long-term complex process and adopt a gradual, continuous approach. This gradual approach respects the natural laws of cultural change, avoiding the rebound and resistance that radical changes can cause.

5 IMPACT ASSESSMENT OF "DESIGN WORKSHOPS" FACILITATING MULTI-ETHNIC "SOFT INTEGRATION"

5.1 Research Design of Assessment Framework

Objectively assessing the impact of "design workshops" on facilitating multi-ethnic "soft integration," this study constructed a multi-dimensional and multi-level assessment framework grounded in quantitative indicators and qualitative changes to comprehensively grasp the intricate impacts of "design workshop" programs.

5.1.1 Evaluation dimensions and indicator system

On the basis of economic, social, and cultural factors, this study built an assessment indicator system, and every dimension includes hard indicators (indicators that were possible to measure directly), soft indicators (indicators that needed to measure indirectly), and composite indicators that could represent the entire status of the dimension.

Its measurement indicators are: rate of growth in products' sales, rate of growth in participants' income, quantity of products innovated, quantity of cross-ethnic firms, and other hard indicators; product premium rate, rate of sharing the factors of production, stability in cooperation projects, and other soft indicators; and economic interdependence coefficient as a general indicator.

The indicators to be employed in social dimension measurement are: frequency of cross-ethnic contact, rate of mixed community formation, rate of shared participation in public affairs, and other hard indicators; level of social trust, satisfaction in conflict resolution, social cohesion, and other soft indicators; social integration index as a general indicator.

Indicators to measure cultural dimension are: proportion of cross-ethnic cultural participation, number of intangible cultural heritage projects launched, proportion of cross-ethnic collaborative design projects, and other hard indicators; frequency of borrowing cultural symbols, degree of identity extension, degree of cross-cultural understanding, and other soft indicators; and cultural proximity index as composite indicator.

5.1.2 Appraisal methods and data sources

The study employed a multi-method, quantitative analysis and qualitative study, and collected evaluation data from multiple sources:

Quantitative methods are mostly: conducting questionnaire surveys of the members of different ethnic groups taking part in "design workshop" projects; collecting product sales rates, income change rates, and other economic factors before and after the project for comparative purposes; and examining interaction relationship changes between different ethnic groups with social network analysis software.

Qualitative methods largely include: deep interviewing of participants in the project, organizers, and local leaders; direct participation of the research team in "design workshop" activities for participatory observation; and case selection for full-process tracing studies in order to observe concrete impact and experience.

Sources of data are: first-hand data collected by the research team themselves, e.g., questionnaire surveys, interview records, observation records; second-hand data, e.g., project reports, authority statistics, literature of related studies; and material evidence, e.g., design work output by projects, product sales data, and news reports.

5.2 Economic Benefit Assessment

One of the main goals of "design workshop" projects is to bring economic value to conventional handicrafts by design innovation and achieve economic development in multi-ethnic regions. The assessment concluded that the projects achieved high-level outcomes at the economic level.

5.2.1 Direct economic benefit analysis

Direct economic effects merely report the immediate increase in sales and income produced by the project. Research showed that "design workshop" projects performed exceptionally well in this regard:

Sales growth in products: The artisans and individuals in the project recorded an average 127% sales growth. For Tai, Yao, and Hmong artisans in Nan Province, northern Thailand, their sales for products grew between 135% to 215% within a year following the project. Their percentage rate of improvement was even greater than that of a control group of people that was not subjected to the project (32% improvement rate).

Income level upgrading: The project promoted participants' incomes directly. Through questionnaire surveys, artisans who received "design workshop" projects elevated their average monthly income from 5,800 baht before the project to 13,200 baht after the project, and it increased by 127.6%.

Product premium rate improvement: By design innovation, premium rate of genuine handicraft products in the marketplace was improved by a wide margin. In the Songkhla Province project in south Thailand, genuine rattan products, by design innovation, had their price in the marketplace improved from 350 baht per unit average to 780 baht with an increased premium rate of 122.9%.

Innovative product innovation: The 12 villages with "design workshops" produced 328 new products, 78% of which entered commercial production and sale, as indicated by statistics. Not only were new products characterized by traditional craftsmanship elements but also changed according to market demand under the current circumstances, thus remaining competitive in the market.

5.2.2 Analysis of indirect economic benefits

In addition to direct economic impacts, "design workshop" programs also initiated a sequence of indirect economic benefits, such as:

Industry chain extension: The projects encouraged the growth of related industry chains. For instance, hi-tech development of traditional clothing generated the boom in northern Thailand's Chiang Rai Province of tourism, catering, and educational training industries. Statistics indicate that each "design workshop" project could support 3-5 related industries at a medium scale and 15-25 indirect job opportunities.

Brand value creation: The projects promoted the creation of regional brands with local cultural characteristics. In northeast Thailand's Loei Province, the project helped to establish the "Three-Tribe Brocade" brand, which enjoyed a good reputation both at home and abroad, and advocated the development of the handicraft industry in the entire region.

Spillover of knowledge and skill: Technical know-how and design acquired through the project provided spillover effects within communities. Surveys indicated that each artisan engaged directly in training had been able to transfer the acquired skills and knowledge to 3.8 average community members, with a knowledge and skill multiplier effect.

Sharing of factors of production: The project encouraged sharing of factors of production among different ethnic groups. In southern Thailand's Yala Province, three previously dispersed ethnic groups began to share channels of raw material procurement, processing factories, and markets, hence reducing the cost of production and increasing efficiency in the use of resources.

5.2.3 Transformation of economic interdependence relations

"Design workshop" activities generated not just economic development but, more importantly, changed the economic interdependence relations among ethnic groups to promote greater economic integration.

Cross-ethnic business firms arise: The project stimulated the formation of joint business firms among ethnic groups. In northern Thailand's Chiang Mai Province, 78% of 32 new handicraft firms that were newly created after the project were jointly owned and established by members of ethnic groups.

Development of the economic interdependence coefficient: According to economic cooperation and exchange among ethnic groups, the economic interdependence coefficient was calculated. Research identified that in participating communities of "design workshop" projects, the economic interdependence coefficient between various ethnic groups rose from 0.32 pre-project to 0.67 post-project, up by 109.4%.

Improved sustainability of cooperation projects: In addition, the sustainability of cross-ethnic economic cooperation was improved. One-year follow-up questionnaires after the project completion indicated that 82% of the cross-ethnic cooperation projects initiated by "design workshops" were still in operation in continuous development, and 68% of them had succeeded in scale expansion.

5.3 Social Benefit Assessment

Social impact of "design workshop" projects is realized to a greater extent in the encouragement of social communication, development of inter-group solidity, and construction of inter-ethnic relationships. The analysis proceeded to the conclusion that the projects achieved the targeted impact within society.

5.3.1 Change of social interaction network

The foundation for ethnic integration consists of social communication. The investigation proceeded to the conclusion that "design workshop" projects initiated social communication between ethnics effectively:

Increased interaction: With the help of the diary method to monitor the participants' daily interaction, it was found that the frequency of interaction among members of different ethnic groups working on the project grew exponentially. The average number of interactions per week among members of different ethnic groups was 1.2 times before the project and increased to 5.7 times after the project, a growth rate of 375%.

Improved quality of contact: Frequency of contact was not only improved, but the quality of contact was also more enriching. Through in-depth interviews, it was found that the project encouraged more enriching contact, more enriching than commodity contact to technical contact, emotional support, and cultural contact.

Expanded. Interaction range: Social network analysis revealed. that the project improved social network integration among. various ethnic groups. Social networks between various. ethnic groups. were quite. segregated. before the. project; the. degree of network integration. improved after. the project, indicating. that social. circles between. various ethnic. groups overlapped. and were interconnected.

5.3.2 Improved community governance and ethnic relations

Enabled "design workshop" projects launched the following positive impacts on community governance and ethnic relations:

More collective participation: The project enabled collective participation of different ethnic groups in public affairs of communities. Statistics show that through the project, public affairs participation rate in multi-ethnic communities rose from 55% to 78%, and ethnic group participation gap declined from 25 percentage points to 8 percentage points.

Enhanced conflict resolution mechanisms: The project encouraged the establishment of more participatory mechanisms for conflict resolution. Reports indicate that 80% of the participating communities established conflict resolution mechanisms founded on dialogue and negotiations, up from a previous 33% prior to the project.

5.3.3 Overall social integration index assessment

In order to best measure the contribution of "design workshop" projects to social integration, the research team constructed a "social integration index" that completely considered a variety of dimensions such as social interaction, public participation, and relation of trust:

Total assessment: According to the assessment of 12 project locations, after "design workshop" projects the social integration index was found to have risen by an average of 62%, proving the success of the projects in promoting social integration. Among them, the communities where the project duration was longer and the participation scale was larger showed improved social integration index more.

Regional difference: There were differences in regional effects of the projects. In the Thai north mountains, where ethnic relations were more harmonious in the past, the social integration effect of the project was more powerful, and the social integration index was improved by 75%; while in the Malay Muslim south of Thailand, due to the history of conflict and religious divisions, the social integration effect of the project was comparatively weak, and the social integration index was improved by 38%.

Analysis of sustainability: By follow-up questionnaires of projects completed 2-3 years prior, they found that there was sufficient social integration sustainability of impact. The scale of social integration didn't decrease significantly after the project closed down, and there were even some communities that went on to further develop, indicating the fact that social interaction mechanisms and trust relations built up by the project contained some self-reinforcing power.

Comparison with control groups: Compared to control group societies where "design workshop" projects had not been implemented, project societies were socially integrated by 45% more, which implied that the project's effect in facilitating social integration was not a result of natural increase but was the result of direct project intervention.

5.4 Cultural Benefit Assessment

Cultural values are also among the most basic values of "design workshop" projects, and the major expression is to facilitate cultural inheritance and innovation, cross-cultural cognition and recognition, and create a common multicultural identity.

5.4.1 Effectiveness of cultural inheritance and innovation

"Design workshop" projects were very effective in facilitating traditional cultural inheritance and innovation:

Spurring intangible cultural heritage projects: Surveys also indicated that among the communities, the extent of endangered traditional crafts restored significantly. In northern Thailand's Nan Province, by the "design workshop" project, seven endangered traditional crafts (e.g., Yao embroidery, Hmong batik, etc.) were restored, and the number of practitioners rose by 126%, and the percentage of young practitioners (those aged less than 35 years old) rose from 15% to 34%.

Intergenerational transfer of traditional skills: The project promoted intergenerational transfer of traditional skills. Statistics show that in the participating villages, the number of apprentices for traditional crafts on average increased by 86% and 70% were youth from the same ethnic village. In northeast Thailand's Loei Province, the number of inheritors of a traditional brocade skill increased from 3 before the project to 15 after the project, and the age structure was significantly younger.

Innovative design output: The project produced a massive quantity of innovative designs that integrated tradition and modernity. According to the statistics, the 12 project sites produced 482 innovative design works, and 63% of them were realized in commercial production. The works not only preserved traditional cultural elements intact but also adjusted to conform to modern aesthetics and usage needs, realizing modern transformation of traditional culture.

Cross-ethnic cultural fusion innovation: Significantly, cross-ethnic cultural fusion innovation was enabled in the project. In Songkhla Province in southern Thailand, joint production fusion design products occupied 33% of overall design output. The products encompassed both groups' cultural features and embodied innovative aspects of cultural fusion.

5.4.2 Enabling cross-cultural understanding and respect

"Design workshop" activities effectively promoted cross-cultural respect and understanding by promoting the cultural exchange between different ethnic groups:

Increased engagement in cultural activity: Research indicates that after taking part in a project, members of a certain ethnic group were significantly more engaged in other ethnic groups' cultural activities. In northeast Thailand's Udon Thani Province, the rate of engagement in other ethnic groups' cultural activities by the members of a given ethnic group rose from 18% before the project to 57% after the project, or 217% higher.

More borrowing of cultural symbols: Surveys showed that borrowing of cultural symbols between different ethnic groups accelerated by a broad margin. In artisan production related to the project, the degree of borrowing cultural symbols from other ethnic groups increased from 12% to 35%. This was not imitation but creative adaptation due to respect and comprehension.

Reduced bias towards culture: Through a standardized measure of bias towards culture, it was determined that the bias between members from different ethnic groups came down significantly after joining the project. The average score of bias came down from 4.3 (5-point scale with higher the score, higher the bias) to 2.3, which is a reduction of 45%. Through extensive interviews, it was also confirmed that through personal contact and cooperation in the project, participants' stereotypes and prejudices towards other ethnic groups considerably reduced.

Enhanced cross-cultural communication ability: Participants' cross-cultural communication ability was also enhanced as a result of the project. Cross-cultural competency testing showed that participants' ability in language communication ability, cultural awareness ability, conflict coping ability, and other abilities increased as the average ability score increased from 2.8 (on a 5-point scale, with higher numbers indicating higher capacity) to 4.2, a 50% increase.

5.4.3 Change in cultural identity and identity construction

"Design workshop" activity had a long-term impact on the cultural identity and construction of identity of the participants:

Growing ethnic cultural confidence: Surveys showed that due to the project, representatives of all ethnic groups became significantly more confident and proud of their own ethnic culture. Cultural confidence ratings grew from 3.5 to 4.4 points on a 5-point scale, i.e., by 26%. In Chiang Rai Province in northern Thailand, one of the participants an Akha craftsman participated: "Thanks to the project, I understood that other people like our traditional patterns and ways so much, and I also feel more proud of my culture."

Range of identity recognition broadened: Most importantly, the project gave the participants a broadened range of identity recognition. Through the study of identity stories, it was found that participants began building more complex identity recognition but did not shed ethnic identity. Although 93% of participants had one ethnic identity before the project, 67% of participants built multi-level identity recognition after the project, e.g., "both Tai and Northern Thai," or "both Malay artisan and Thai contemporary designer."

Augmented cultural proximity index: On the basis of overall analysis of ethnic groups' frequency of cultural exchange, quality of interaction, and level of recognition, an augmented cultural proximity index was calculated. Findings show that pilot villages' cultural proximity index increased from 0.41 to 0.78 (top 1), an increase of 90%, indicating that gap between ethnic groups decreased substantially and cultural recognition increased.

Formation of collective memory: Cross-ethnic collective memory formation was also made possible by the project. Collective experience and memory among members of various ethnic groups were formed through collaboration in creating something, and the experience acted as affective glue that kept ethnic groups together. An independent "Design Workshop Commemoration Exhibition" was staged by participants in northeast Thailand's Nong Khai Province

centered on the project process and outcome and emerged as a shared cultural marker and collective memory binding heterogeneous ethnic groups.

6 CONCLUSION AND DISCUSSION

6.1 Main Research Findings

Grounded upon systematic study and multi-dimensional analysis of Thailand's design workshop projects, this research has reached the following key conclusions:

Firstly, "design workshops" as a "soft integration" policy effectively promote multi-ethnic integration and interaction in the interface among three dimensions of cultural cohesion, collaborative design, and relational identity. These three dimensions are interconnected and mutually reinforcing, and they form a system of virtuous cycles: cultural cohesion provides content foundation to collaborative design, collaborative design provides workable solutions to cultural cohesion, they both contribute to the construction of relational identity, while relational identity further supports the processes of cultural cohesion and collaborative design.

Second, "design workshop" projects create positive impacts in economic, social, and cultural domains. In the economic dimension, the projects promote innovative production of traditional handicrafts, raise product value and participant income, and change economic interdependence relations between different ethnic groups; in the social dimension, the projects enhance the intensity and frequency of interaction between different ethnic groups, enhance community governance and ethnic relations, and enhance the level of social integration; in the cultural dimension, the projects promote inheritance and innovation of traditional culture, enhance cross-cultural understanding and respect, and promote the construction of multi-level identity recognition.

Third, the "design workshop" model demonstrates a set of distinct mechanism features that render it a successful trajectory for ethnic integration. These features are: being process-oriented and not result-oriented; endogenous motivation and not external coercion; co-creation instead of one-way instillation; unity of cultural value and economic value; and gradual change instead of rapid transformation. These characteristics enable "design workshops" to ensure exchange, understanding, and cooperation between different ethnic groups on the basis of appreciating cultural diversity.

Fourthly, although the "design workshop" model has achieved excellent results, it still has some certain constraints and difficulties. The biggest constraints are: limited coverage, slow large-scale promotion; after-project sustainability problem; elite-centered participation bias, comparatively low marginal group participation rate; poor efficiency in deep-set conflicts involving religious beliefs, claims of land etc.; and over-commercialization risk of culture. These limitations will need to be improved and solved in future practice.

6.2 Theoretical and Practical Significance

The theoretical significance of the present study is primarily evident in the following respects:

First, it presents and elaborates the theory of "soft integration," expanding the theoretical horizon of multi-ethnic integration research. Traditional ethnic integration research focuses on "hard" variables in the realms of politics, economy, and institutions. This book emphasizes the function of "soft" variables such as cultural interaction, creative practice, and identity recognition, and provides a new theoretical framework for understanding peaceful coexistence in multi-ethnic societies.

Secondly, it constructs a three-dimensional theoretical framework of "design-promoted soft integration," and reveals the mechanisms and channels of design intervention in multi-ethnic integration. Not only can this framework be applied to analyze design workshop projects, but also to other creative cultural activities, providing an operational analytical framework for research on multi-ethnic integration.

Third, it enriches cross-disciplinary studies between design studies and ethnology in terms of methodology and content. The study introduces design thinking method into multi-ethnic integration studies and brings ethnological thinking into design studies, extending the research fields of both subjects and enabling cross-disciplinary integration and exchange.

In practical application, the study is helpful as a reference for cultural industry development and social governance innovation in multi-ethnic regions:

First, the "design workshop" model puts forward a practical solution to protecting and innovatively developing traditional handicrafts. Through design intervention, traditional crafts can both inherit cultural characteristics and meet existing market demands, achieving a win-win situation of industrial development and cultural inheritance.

Second, the idea of "soft integration" introduces innovative theories for innovation in ethnic work methods. Compared to traditional administrative approaches or economic incentives, ethnic work methods based on "soft" weapons such as design, art, and education are better able to stimulate the initiative and creativity of ethnic groups and produce natural and long-lasting integration effects.

Finally, the evaluation framework and procedures of this research provide standards for effectiveness measurement of similar projects. The multi-dimensional, multi-method evaluation system prioritizes economic impacts in the short run as well as cultural impacts in the long run in order to comprehensively grasp the complex effects of such projects.

6.3 Limitations of Research

Although this research has achieved some things, it also has some limitations:

Second, most of the research cases are drawn from Thailand. Though there is cross-regional comparison, cultural and institutional specificities as well as universality of research findings need further verification. In particular, differences in administrative systems, social organization, and cultural patterns among nations may shape the effectiveness in implementing the "design workshop" model.

Second, the study duration is brief, and the long-term project influence evaluation has not yet been finished. Multi-ethnic integration is a long-term process, and this observation duration of the study (up to maximum 3 years) might be not long enough to encompass its long-term development patterns.

Third, the research objects are mainly artisans and local inhabitants who participate in the project, with relatively insufficient research on the impact of non-participants. The radiation effect and indirect impact of the project need to be verified by broader social surveys.

Finally, being a "soft" intervention approach, the effectiveness of the "design workshop" model in solving deep-rooted ethnic contradictions and conflicts should also be studied further. In some areas with protracted conflicts and high religious differences, it might be difficult to solve deep-seated problems with mere "soft" approaches.

6.4 Future Research Directions

Based on the results and setbacks of this study, future research can go deeper from the following:

Second, expand the scope of investigation to conduct comparative studies in other countries and regions, to validate the cross-cultural applicability of the "design workshop" mode, and to compare the variations of implementation strategies and impacts under varying cultural and institutional contexts.

Second, extend the research cycle to implement long-term tracking studies, systematically examine the long-term impact and development tendency of "design workshop" projects, emphasizing long-term impacts and self-sustaining mechanisms after the project close.

Third, extend research objects to explore the impact of projects on indirect participants, study the social radiation effects and diffusion mechanisms of the "design workshop" model, and explore how to expand project coverage and impact.

Fourth, deepen theoretical construction into dialogue and integrate the theory of "soft integration" with other ethnic integration theories to construct a more systematic and fine theoretical system of multi-ethnic integration.

Fifth, study the effective interaction between "soft" and "hard" measures, exploring how to organically combine "soft" intervention measures such as "design workshops" with "hard" measures such as administrative, economic, and legal means to form a multi-level comprehensive ethnic integration strategy system.

Finally, explore the new evolution of the "design workshop" model in the information age, researching how information technology, social networks, virtual worlds, and other emerging technology resources are utilized to expand the substance and structure of "design workshops" so their influence and viability can be intensified.

In short, research on "design workshops" for multi-ethnic "soft integration" not only has great academic value but also wide practical value. Future studies should continue to deepen theoretical studies, expand practical applications, and provide more wisdom and solutions for constructing a harmoniously diversified multi-ethnic society.

COMPETING INTERESTS

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