

Social Mechanisms and Design Methods for Utilizing Cultural Capital: The Case of Chiang Mai's Stream-based Cultural Heritage

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Abstract

Cultural capital stands as the cornerstone of this research, serving as a vital element reflecting the intricate relationships between people, regions, and ways of life, which accumulate to form a cultural ecosystem. The notion of utilizing cultural capital to bolster community economies has long been discussed, yet systematic implementation remains lacking. This research paper employs a methodology comprised of three primary steps: 1) the process of identifying cultural capital through cultural mapping; 2) the process of extracting cultural capital through cultural extraction; and 3) the process of uplifting cultural capital via cultural revitalization. This research paper aims to synthesize the research conducted and present it as a systematic approach and mechanism for fostering cultural capital. It will delve into two primary areas of focus: 1) the process of cultivating the cultural ecosystem; and 2) the process of augmenting cultural capital through design, drawing insights from field surveys and activities across all five study areas. One significant finding of this research is the identification of three social mechanisms to nurturing cultural capital: one led by government agencies, another driven by communities, and a hybrid model with mixed characteristics. However, several challenges have been encountered, including the following: 1) a shortage of community members proficient in storytelling to complement narrative frameworks; 2) a deficit of individuals adept in cultural preservation; and 3) the absence of an evaluation system that accurately portrays the reality of the situation. Addressing these challenges is crucial for the effective promotion and preservation of cultural capital.

Keywords: cultural capital, utilizing, design methods, social mechanism, Chiang Mai

Introduction

“Cultural capital” is a concept elucidated and defined by numerous scholars, notably Pierre Bourdieu. According to Bourdieu (1986: 243-244), cultural capital encompasses three distinct levels. 1) The individual level: this pertains to a person’s social assets, including their education, intelligence, communication style, language proficiency, and sartorial preferences. It encompasses the accumulation of cultural knowledge that individuals refine and enhance through personal development and training. 2) The objectified level:

at this level, cultural capital is manifested in objects, products, architectural designs, belief systems, and various repositories of knowledge. And 3) the institutional level: cultural capital also operates at an institutional level, encompassing societal or national structures and systems. This level, regarded as the “institutionalized state,” influences interactions and dynamics among individuals within a larger social context. It encompasses institutional practices, norms, and ideologies that shape cultural values and behaviors at a macro level. Overall, cultural capital encompasses the diverse forms of knowledge, skills, behaviors, and resources that individuals and societies possess, shaping their social interactions, identities, and opportunities for advancement.

According to Thahom and Senarat (2018: 18-19), “cultural capital” embodies the foundational knowledge intrinsic to local communities. It encompasses a rich tapestry of wisdom, arts, culture, traditions, and beliefs, akin to a natural mechanism that fosters a learning process deeply rooted in the way of life. This holistic approach integrates societal dimensions, cultural practices, belief systems, environmental factors, and community economics. The culmination of these elements results in the formation of a collective consciousness, a mental nexus that binds individuals within society, guiding their behaviors and adherence to cultural norms. Thahom and Senarat (2018: 19) present a pragmatic framework for leveraging cultural capital, delineated into three essential steps: 1) *enhancing product style*, which involves refining the style of products to resonate with contemporary tastes while preserving their cultural essence; 2) *brand building*, which advocates for creating distinctive brand identities through innovative storytelling and unique offerings; and 3) *effective management and strategy*, which underscore the significance of managerial proficiency and strategic planning in achieving business success. Clear and well-defined strategies, coupled with adept management, are essential for driving implementation and realizing business objectives. By adhering to these guidelines, stakeholders can harness the power of cultural capital to not only sustain cultural heritage but also to foster economic growth and community development.

Tunt Chomchuen’s perspective on cultural capital aligns closely with Bourdieu’s conceptualization. Cultural capital, according to Chomchuen, comprises intellectual assets amassed over time, possessing intrinsic value for both individuals and society beyond its economic worth. Understanding the transformation of cultural capital into tangible products or services is paramount. Moreover, cultural capital encompasses the accumulated knowledge and wisdom of local communities, including their indigenous practices, values, and beliefs. These cultural elements serve as cohesive forces within society, binding individuals together through shared heritage and collective identity (Chomchuen, 2012: 9). Chomchuen’s view underscores the multifaceted nature of cultural capital, emphasizing its role as a reservoir of historical knowledge, societal values, and cultural significance. Transforming this capital into meaningful products or services requires a nuanced understanding of its cultural context and significance.

This research regards cultural capital as an intrinsic element of community identity, echoing Bourdieu’s perspective. It represents the accumulated wisdom passed down through generations, manifesting in both tangible and intangible forms. Tangible cultural capital, also known as “tangible culture,” encompasses physical objects such as artifacts, clothing, architecture, statues, and musical instruments. Conversely, intangible cultural capital, termed “intangible culture,” encompasses knowledge, wisdom, emotions, beliefs, values, rituals, performances, and songs. Moreover, this research views cultural capital as an essential resource for further development and adaptation. It acknowledges the interconnectedness of various dimension social, cultural, economic, geographic, historical, and political—that contribute to the fabric of cultural capital. Thus, it emphasizes the importance of preserving

cultural capital within its broader context to prevent its dilution or distortion. Rather than isolating cultural capital, the research advocates for mechanisms and methods that systematically promote and uplift these cultural assets through product designs and event-based activities, ensuring their sustained relevance and vitality within communities.

The promotion of cultural capital through design work is a significant outcome of this research. In particular, the incorporation of a narrative tied to the cultural capital of communities situated along and connected to waterways emphasizes the importance of cultural capital in this study, linking it closely with both history and geography. This approach aligns with the current government's Soft Power policy. However, the promotion of cultural capital could also be seen as one of the objectives of the UNESCO Creative Cities Network. In the future, if this research project can contribute to the Creative Cities Network, it is expected to enhance Chiang Mai's potential even further.

Objective and Methodology

While this research primarily focuses on spatial analysis within communities, the stages of data collection, classification, and analysis are pivotal in shaping the research framework (Figure 1). To elaborate further, the research framework began with comprehensive data collection, comprising the following three steps.

1) Historical data collection: the research team gathered historical information on Chiang Mai city, including articles, books, and maps from various periods. Additionally, interviews with experts in the history of Chiang Mai were conducted to gain valuable insights. From this initial process, a cultural map emerged, delineating the spatial distribution of cultural capital associated with the watercourse. This map serves as a visual representation of the cultural heritage sites, landmarks, traditions, and other cultural assets located along the waterways. This provided a foundational understanding of the city's development and its cultural context.

2) Physical and geographical data collection: detailed physical data of the geography were collected, focusing on the pathways of waterways and traditional irrigation systems within Chiang Mai's city area. The study extended from the natural water source at Doi Suthep to the Ping River, showing the stream irrigation network.

3) Local studies on cultural capital: local studies were conducted to identify various kinds of cultural capital related to the boundary of the community where the cultural capital was allocated, and to waterways and irrigation systems in the area. The local studies phase involved broad data collection across Chiang Mai city, mapping out 50 specific sites or entities of cultural significance connected to the waterways and irrigation systems.

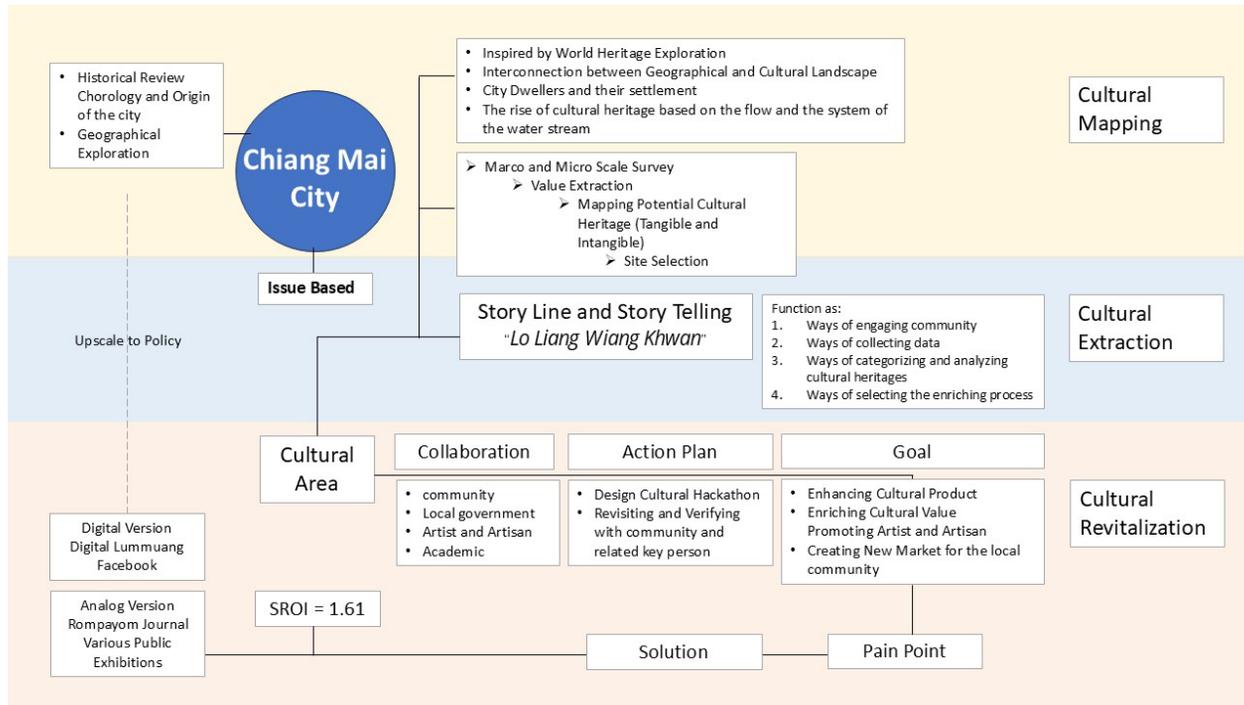


Figure 1 Diagram of research framework
(Graphic by research team, 2024)

As the first comprehensive data collection framework for understanding Chiang Mai’s historical, geographical, and cultural landscape, this research formed the basis for further analysis and research. The analytical part in the research framework consists of the following three key processes. 1) *Cultural mapping*--this initial phase involves selected kinds of cultural capital in relation to the community. 2) *Cultural extraction*--is to extract cultural capital from the data collected. This involves analyzing the identified cultural assets to discern their intrinsic value, significance, and potential for further development. And 3) *cultural revitalization* - the final phase focuses on upholding and revitalizing cultural capital within the community. Building upon the insights gained from cultural mapping and extraction, researchers develop strategies and interventions aimed at preserving, promoting, and enhancing cultural assets. At every step, the research team collaborates with community members, community leaders, and stakeholders involved with cultural capital in the area.

Cultural mapping aims to integrate and map the locations of selected kinds of cultural capital alongside their geographical and historical contexts. The analysis revealed patterns in the frequency and distribution of 50 selected cultural capital sites, leading the research team to classify and group them into five key focus areas for in-depth study: 1) Wiang Chet Lin, 2) Hua Wiang- Nong Bua, 3) Mae Ping and Sapao tradition, 4) Lam Khu Wai and Nantaram community, and 5) Lam Mueang Phaya Kham. Each area is distinguished by its unique cultural significance and historical relevance. Through this mapping process, the research aims to establish a robust foundation for further analysis and action, fostering a deeper understanding of Chiang Mai’s cultural landscape and guiding strategies for preserving and promoting its cultural heritage.

Cultural extraction delves deeply into community areas to analyze the intricacies and challenges related to cultural capital. This process identifies challenges within the cultural landscape, exploring their underlying causes and contributing factors. It also establishes connections and networks across various

cultural contexts, involving individuals and organizations both within the community and those engaged with its cultural assets. During the *cultural extraction* phase, detailed components of cultural capital were examined across the five selected working sites. These components included geographical data, historical narratives, oral traditions, memories, cultural artifacts, colors, patterns, and more. The findings were systematically categorized into distinct elements to support the enhancement and promotion of cultural capital. These elements served as resources to inspire and refine existing community products and to develop new designs in collaboration with local designers. A cohesive narrative, themed around cultural capital along the waterways, was crafted to interconnect the stories of the selected areas. By thoroughly understanding the complexities of cultural capital—its strengths, weaknesses, and areas for improvement—researchers can design tailored methodologies and activities for each study area. This approach fosters the development of targeted strategies to preserve, enhance, and utilize cultural capital for community development and resilience.

Cultural revitalization can be seen as the last step, focused on promoting and rejuvenating various forms of cultural capital. The research team assumed dual roles depending on the conditions of each working site and the state of its local cultural capital. In areas where cultural assets were already well established, the team acted as facilitators, supporting and enhancing existing initiatives. By contrast, for sites lacking local products or requiring new outputs to reflect or amplify the value of cultural capital, the team took on the role of designers, developing innovative approaches to make cultural capital accessible to wider audiences, including children, youth, and tourists. Key activities in this phase included “Design Cultural Hackathons,” which aimed to foster collaboration between local communities and designers, enabling better design solutions and more effective communication with target groups. Additionally, the research team curated cultural showcases across various city locations and developed an online marketplace to create digital platforms for marketing cultural products. This multi-faceted approach ensured the sustainable development and promotion of cultural capital, making it relevant and engaging for both contemporary and future audiences. By involving local stakeholders and designers in the revitalization process, the project harnessed the creative potential of individuals and utilized design as a powerful tool for promoting cultural heritage and fostering community development. Through these efforts, the project strives to ensure the sustainable preservation and transmission of cultural capital for generations to come.

Defining Study Areas through the History and Geography of Chiang Mai

The primary focus of this research project lies in the management of cultural capital. However, equally significant is the design of a systematic process for the selection and access of each cultural asset within different communities. This research contends that the selection of cultural capital must be interconnected, grounded in historical context, geography, and local conditions. Without such integration, the ability to drive and enhance the value of cultural assets may be limited, ultimately leading to their degradation. As a result, one of the research methodologies employed involves comprehensively understanding the development and transformations of rivers and surrounding areas, particularly from their origins to the midstream, where cities and communities are typically located, and downstream through various tributaries.

This examination allows for a holistic understanding of the interplay between the waterways and the cultural capital of Chiang Mai city. To facilitate this understanding, the research divides the development and changes of the Lam Mueang River into four distinct sections, each representing a significant phase in

the river's evolution and its connection to the city and its cultural assets. By delineating these sections, the research aims to unveil the intricate relationship between the river's dynamics and the cultural heritage of Chiang Mai, providing a comprehensive framework for the management and preservation of cultural capital within the region (Ongsakul, 2006: 130).

The first period predates the construction of Chiang Mai city and marks the formation of the Lanna Kingdom following Phaya Mangrai's establishment of the city in 1296 (Figure 2). The selection of Chiang Mai's location was guided by auspicious signs, three of which were associated with water sources. Phaya Mangrai's careful consideration of water sources during the city's founding was paramount, as these sources served as vital lifelines for the city's inhabitants, sustaining both agricultural activities and daily consumption. Of particular significance were Wiang Chet Lin and its seven streams, including an ancient water source located within Wiang Chet Lin (Guntang, 2015: 97-99) These water sources originated from Doi Suthep and flowed down to nourish Chiang Mai, with Chaeng Hua Lin serving as a pivotal point where water entered the city's moat. Additionally, water from these sources was diverted to fill the moat surrounding Chiang Mai, fortifying the city's defenses alongside its walls. This period underscores the intrinsic connection between water sources and the establishment of Chiang Mai, highlighting the strategic importance of these resources in shaping the city's development and resilience against external threats.

The second period marks a prosperous era for Chiang Mai during the reign of Phaya Kue Na, serving as the capital of the Lanna Kingdom (Figure 3). Chiang Mai flourished under Phaya Kue Na's rule, expanding its territory to establish Wiang Suan Dok. Additionally, significant developments occurred during the reign of Phaya Sam Fang Gan, including the construction of Wiang Chet Lin, reaching its pinnacle of prosperity under King Tilokarat. Water management played a crucial role during this period, with efforts focused on preserving vital resources and protecting the burgeoning city. An ancient reservoir, rock formations, and earthen embankments, located within the present-day grounds of Chiang Mai University, were instrumental in diverting water from Doi Suthep, safeguarding Wiang Suan Dok from potential destruction. Moreover, segments of the Lam Khu Wai were constructed to facilitate drainage from Chiang Mai to the Mae Kha and Mae Ping rivers, bolstering flood control measures within the city. This period reflects a significant advancement in water management techniques, underscoring the city's resilience and adaptability in navigating its continued growth and prosperity.

The third period signifies a tumultuous era for Chiang Mai as it came under Burmese rule and later became part of Siam in 1774 (Figure 4). The decline of the Lanna Kingdom commenced towards the end of Phaya Kaew's reign, culminating in Burmese dominance until Phaya Ja Ban and King Kawila successfully restored independence. However, it took over two decades to muster the strength needed to reclaim Chiang Mai, relying heavily on mobilizing local support. This included campaigns to incorporate various ethnic groups forcibly, as epitomized by Kraisi Nimmanhaemin's phrase, "picking vegetables and putting them back in the city." The shift to the Monthon Thesaphiban system by Siam further altered the power dynamics, notably through land reforms that redistributed ownership from northern lords to formerly enslaved individuals. This redistribution led to numerous changes, including the filling of water sources within the inner city area due to the newfound landownership by the populace (Satsue and Ongsavangchau, 2020: 225) These physical alterations continued until 1933, coinciding with the tenure of Major General Chao Kaew Nawarat as the last ruler of Chiang Mai. Notably, Nong Bua, originally one

of the seven auspicious signs guiding Phaya Mangrai's decision to establish Chiang Mai, underwent significant changes, becoming shallow and ultimately losing its swamp status.

The fourth period marks the transformation of Chiang Mai into a modern city, spanning from the era of Major General Chao Kaew Nawarat in 1934 to the present day (Figure 5). During this time, Chiang Mai underwent significant adaptations to comply with the policies of the central government as Siam transitioned from a royal country to one of provincial administration.

Numerous developments ensued, including the establishment of public utility systems and land reforms, leading to substantial changes in the city's landscape. Perhaps the most impactful change was the implementation of a centralized state irrigation system in 1970, disrupting the previously integrated water management system (Satsue, 2018: 233-234). Consequently, the connection between the landscape and the natural ecosystem was severed, leading to significant deterioration of the local river and streams (Chawangiew, 2020: 22-25). Once a lifeline nourishing the city, the river now functions as a mere wastewater conduit, devoid of its original purpose and meaning. This period highlights the complexities of urban development and the challenges of balancing progress with environmental preservation and cultural heritage conservation (Suwatcharapinun, 2016: 122-129).

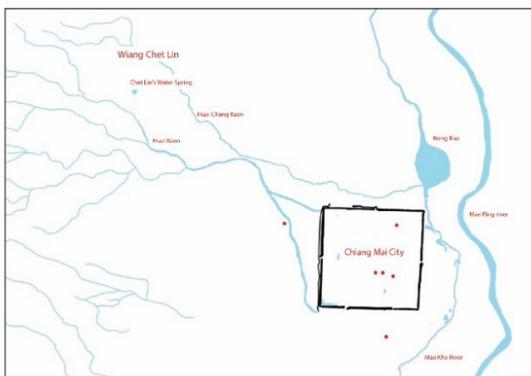


Figure 2 Development of water resources and the settlement of Chiang Mai city of the first period, the era before the Mangrai-Phaya Phayu dynasties (Graphic by research team, 2024)

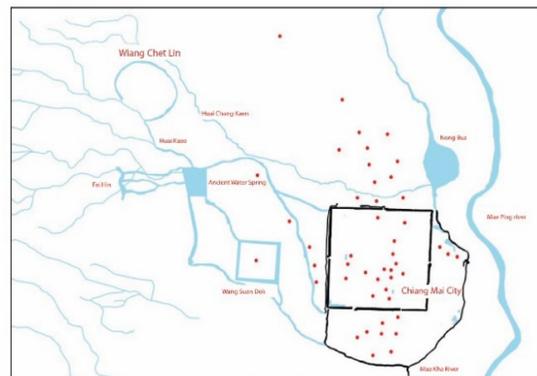


Figure 3 Development of water resources and the settlement of Chiang Mai city of the second period, the Phaya Kue Na-Phaya Lok Rat era (Graphic by research team, 2024)

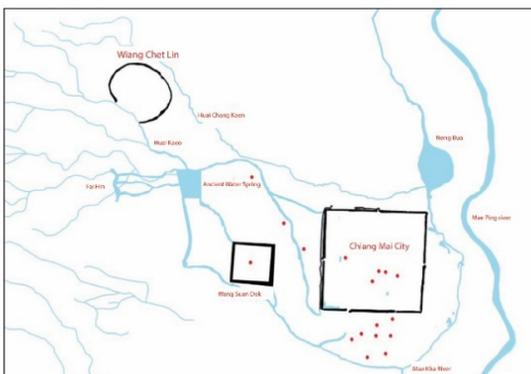


Figure 4 Development of water resources and the settlement of Chiang Mai city of the third era: Phraya Kaew era of the Mangrai dynasty - Major General era Chao Kaew Nawarat (1933) (Graphic by research team, 2024)

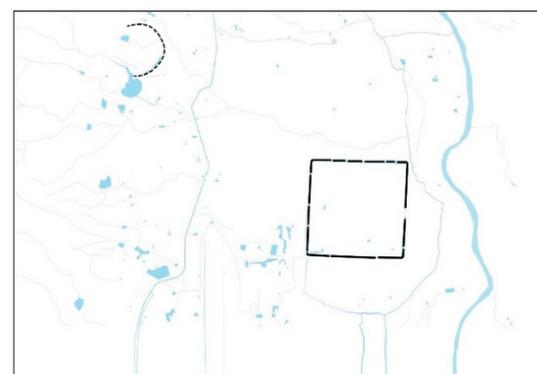


Figure 5 Development of water resources and the settlement of Chiang Mai city of the fourth era, the era of Major General Chao Kaew Nawarat (1934-present) (Graphic by research team, 2024)

Design Methods for Utilizing Cultural Capital

Based on the historical transformations of Chiang Mai's river systems and surrounding areas over time, the following section discusses the mechanisms and approaches for reviving, conserving, and utilizing the cultural capital of the five focus areas (Figure 6).

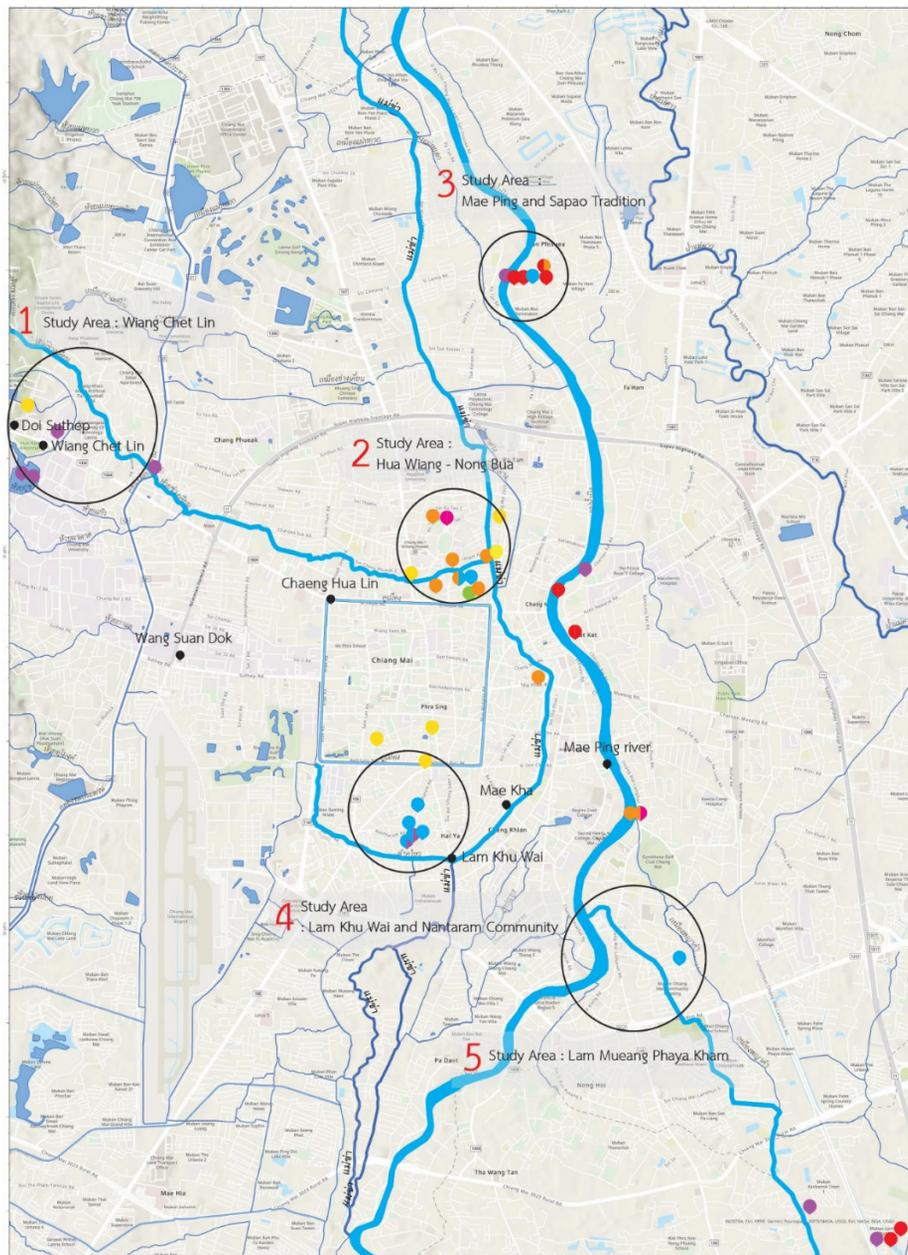


Figure 6 The location of the 50 cultural capital points selected by the research team that led to the designation of the five study areas (Graphic by authors)

Study Area 01: Wiang Chet Lin

The research team focusing on area 1, Wiang Chet Lin, conducted a comprehensive survey to identify its prominent cultural capital. The research team highlighted the significance of the ancient water source located in the heart of Wiang Chet Lin, along with the presence of a large *chamcha* tree and the water

surrounding the circular moat. These elements serve as vital cultural assets worthy of recognition and preservation. Moreover, the visible remnants of the city's historical infrastructure contribute to the area's distinct character, offering tangible experiences for visitors and residents alike. However, the research team also identified challenges within area 1, particularly regarding fragmented governance and limited community involvement in preservation efforts. Additionally, budget constraints hinder initiatives aimed at enhancing the infrastructure covering the water sources, thereby impeding efforts to promote and elevate the importance of this cultural capital (Figure 7).



Figure 7 The work process of study area 1: Wiang Chet Lin
(Photos, graphics, and mixed media artwork by research team, 2024)

To address these challenges and achieve the goals outlined for study area 1, the team proposed a multifaceted approach: 1) *Establishing connections*: the team aims to foster collaboration among various government agencies by crafting compelling narratives that highlight the historical significance of Wiang Chet Lin. This can be achieved through the development of historical ecotourism routes, aimed at engaging visitors and locals alike. 2) *Engaging new communities*: the team plans to involve students from Chiang Mai University and Rajamangala University of Technology Lanna, nurturing them as active participants in the preservation and revitalization of Wiang Chet Lin. Practical training and design competitions for the Wiang Chet Lin Water Pavilion offer opportunities for hands-on involvement and skill development. 3) *Promoting accessibility*: the research team intends to translate the historical map of Wiang Chet Lin into easily accessible formats, such as souvenirs, targeting younger generations. This initiative aims to raise awareness and appreciation for the area's cultural heritage among a wider group of audiences. By implementing these strategies, the research team aims to not only preserve Wiang Chet Lin's cultural capital but also to foster community engagement, promote interagency collaboration, and ensure its cultural significance is appreciated by present and future generations.

Study Area 02: Hua Wiang-Nong Bua

The research team’s approach in the second study area, focusing on Nong Bua and the surrounding Hua Wiang community, acknowledges the challenges posed by the area’s altered historical landscape. Rather than attempting to reclaim Nong Bua through legal means, the team aims to “reflect” the significance of its existence through community engagement and creative activities. The Hua Wiang community, formerly known as Nong Bua, holds a lost image that is difficult to restore. Additionally, the community’s photographs have been overlooked, failing to receive the attention they deserve. The challenge lies in highlighting the importance of the area and its hidden history, particularly in relation to Nong Bua (Figure 8).

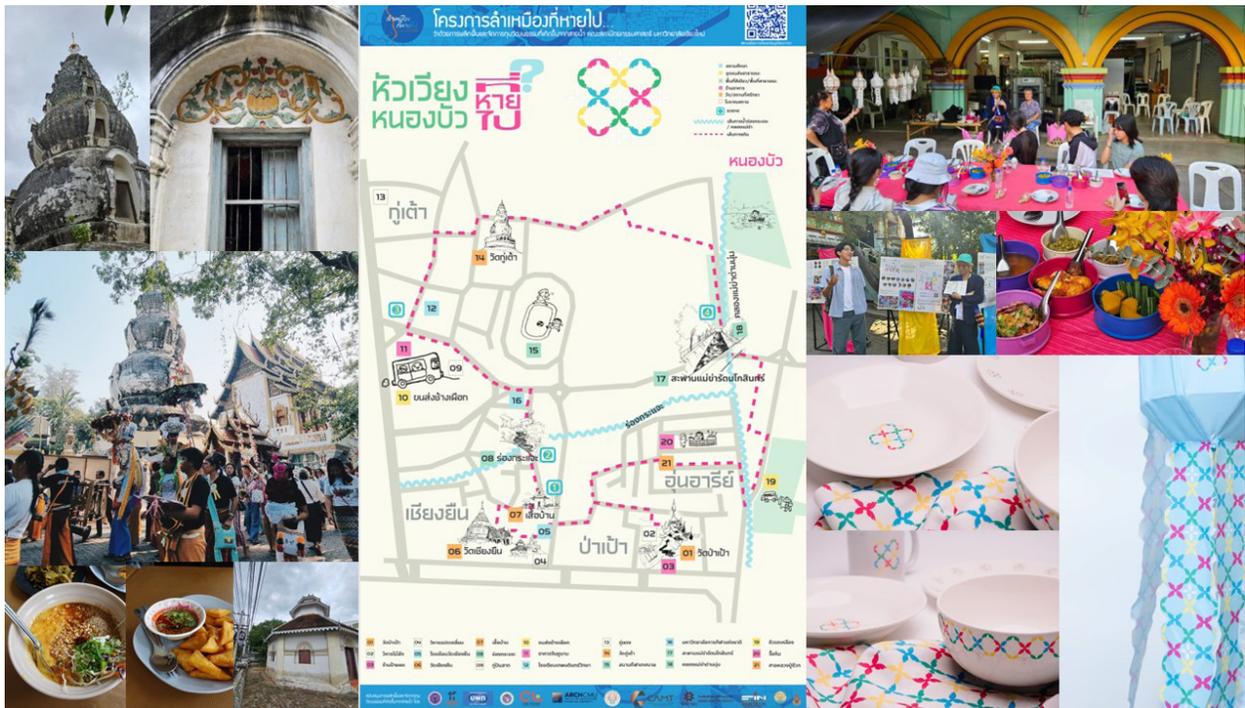


Figure 8 The work process of study area 2: Hua Wiang Nong Bua
(Photos, graphics, and mixed media artwork by research team, 2024)

To address this challenge, the research team has proposed several activities for study area 2.

- 1) *Collage memories*: this activity involves creating collages using original photographs of the current urban area, juxtaposed with images of Nong Bua and the Hua Wiang community. This allows residents and visitors to visualize the changes that have occurred over time, fostering a deeper appreciation for the area’s history.
- 2) *Walking with a community map*: participants will embark on guided walks using a specially designed community map that connects the four community areas. This map highlights the clash between traditional and contemporary land use practices, revealing hidden effects of urbanization and development.
- 3) *Branding activities for “Hua Wiang - Nong Bua”*: through branding activities, the team aims to communicate the unique identity of the Hua Wiang community, emphasizing its connection to Nong Bua. This collaborative effort between designers and entrepreneurs will utilize colors and symbols to create a sense of community pride and identity, which will be shared with tourists visiting the area. By implementing these activities, the research team hopes to raise awareness of the historical significance

of Nong Bua and the Hua Wiang community, fostering a sense of community pride and identity among residents while also engaging visitors in the area's rich cultural heritage.

Study Area 03: Mae Ping and Sapao Tradition

When discussing cultural capital related to the Ping River, the Yi Peng tradition often takes precedence. However, the research team in study area 3 places significant importance on the “Sapao” tradition, which coexisted with the Lanna people’s Yi Peng tradition before the influence of central region *krathongs*. *Sapaos*, or junk boats, were commonly crafted at temples, where villagers would gather to construct large boat-shaped *sapaos*. These *sapaos* would then be adorned with gongs and drums and ceremoniously floated down the river, with donations made at the pier before their release. This practice served as a form of donation, benefiting impoverished individuals waiting in the river to receive essential goods (Chiang Mai University Library, 2012). Through the analysis of *sapao*'s cultural capital, the research team identified the San Sai Ton Kok community as a bastion of cultural heritage, where traditions are perpetuated through the Slee-ping Chaikaew Kwang Learning Center and annual Ping River worship ceremonies. However, the intricate process of *sapao* crafting presents challenges, including sourcing local materials and fostering collaboration among community members, temples, and government agencies (Figure 9).



Figure 9 The work process of study area 3: Mae Ping and *sapao* boat trip
(Photos, graphics, and mixed media artwork, by research team, 2024)

The research team’s efforts in study area 3 are threefold. 1) *At the community level*: the emphasis is on knowledge dissemination and tradition continuation, collaborating with the Slee-ping Chaikaew Kwang Learning Center to educate the public about Long Sa Pao’s significance and cultural capital along the Ping River. 2) *At the city level*: the focus is on reviving the Long Sa Pao tradition to underscore the river’s value and the Yi Peng tradition’s river worship. This involves cooperation with municipal education

offices, cultural institutions, temples, schools, and communities to develop eco-friendly riverfront areas. 3) *At the artist and cultural entrepreneur level:* collaboration with Lanna Wisdom School and the creation of *sapao* in innovative ways aim to expand the creative Lanna economy. This involves working with the five new local artisans (known as *salas*) to produce *sapao* creatively, promoting cultural heritage and economic development. Through these multi-level initiatives, the research team endeavors to preserve and revitalize the *sapao* tradition, fostering community pride, cultural preservation, and economic growth along the Ping River.

Study Area 04: The Lam Khu Wai and Nantaram Communities

The research project places significant importance on the Lam Khu Wai River, particularly concerning the southern area of Chiang Mai during the Chiang Mai revival period. This region became known for its artisan community, comprised mainly of individuals forcibly relocated from various areas. Notably, the Nantaram community, predominantly Tai Khuen people from Chiang Tung in Myanmar, excels in crafting lacquerware and producing a community food known as “*nam-nang*.” A staple food within the community, *nam-nang* undergoes a meticulous preparation process involving buffalo hide boiled until pulpy, then applied onto banana leaves or bamboo sheaths, and dried until translucent. The presence of Lam Khu Wai, providing essential moisture for agricultural purposes, also plays a crucial role in the lacquerware drying process and fosters community interaction, as labor is pooled for various production stages (Figure 10).



Figure 10 The work process of study area 4: Lam Khu Wai and Nantaram communities
(Photos, graphics, and mixed media artwork by research team, 2024)

In study area 4, the research team proposes several activities to leverage the connection between Lam Khu Wai and the Nantaram community. 1) *Branding for lacquerware and leather products:* the team suggests creating a graphic diagram showcasing the 12-month process of lacquer and leather production,

...serving as a branding tool for community cultural capital. This diagram can be incorporated into packaging designs for lacquerware products. 2) *Collaboration with the Food and Packaging Innovation Center (FIN) at Chiang Mai University*: by partnering with FIN, the research team aims to enhance product development and taste innovation for noodles, potentially expanding the market for locally-produced goods. These products have already been linked to local entrepreneurs. 3) *Developing of community tourism routes*: the team proposes the establishment of tourism routes allowing visitors to learn about the production processes, purchase goods, and sample local delicacies, such as *nam-nang*. This initiative aims to generate additional income for the community while promoting cultural exchange. Through these activities, the research team seeks to amplify the cultural significance of the Nantaram community's artisanal traditions, foster economic growth, and cultivate sustainable tourism opportunities rooted in the region's rich cultural heritage.

Study Area 05: Lam Mueang Phaya Kham

Located just beyond Kawila Camp to the south, Weir Phaya Kham stands as a prominent irrigation weir within Chiang Mai Municipality, constructed to regulate water flow from the Ping River and irrigate the agricultural expanse of 16,721 rai (or 26,753,600 sq.m.) in Chiang Mai's southwest. Unlike the tangible cultural capital found in other areas, the significance of Lam Mueang Phaya Kham lies in its intangible cultural capital—the age-old water management knowledge of the Lanna people. In the northern region lies the renowned Weir Mine Contract, a well-established regulation within Lanna society governing water allocation and maintenance responsibilities among members, water users, weir mine leaders, and local villagers. This system has historically ensured equitable water distribution to rice fields while imposing penalties for violations or misconduct. However, with urban development and the advent of modern irrigation technologies, traditional water management practices have gradually waned, overshadowed by contemporary methods and machinery (Figure 11).



Figure 11 The work process of study area 5: Lam Mueang Phaya Kham
(Photos, graphics, and mixed media artwork by research team, 2024)

To preserve and disseminate this invaluable cultural knowledge, the research team in study area 5 is focusing on several youth engagement and awareness-raising initiatives. 1) *Creation of a tourist map*: a comprehensive tourist map along Phaya Kham Mueang Lam will showcase the weir mine ecosystem, irrigation systems, and local products. This initiative aims to educate visitors about the significance of Phaya Kham Mine while benefiting local entrepreneurs and producers along the canal. 2) *Knowledge transformation into designs*: the team plans to develop educational board games for children and youth, such as “Lanna Farmer,” which elucidates the rice farming process, “Nakhon Lab,” which explores the preparation of a local meat dish known as *larb* using ingredients from the Phaya Kham mine shaft, and “Mine Weir Manager,” which simulates the water management process outlined in the weir mining contract. These interactive games aim to instill a deeper understanding of traditional practices and foster appreciation for Lanna cultural heritage. The research team endeavors to ensure the preservation and transmission of invaluable water management knowledge from generation to generation, fostering a sense of cultural pride and environmental stewardship among Chiang Mai’s youth.

Findings

As the project progresses across all five areas simultaneously, employing consistent research methods, nuanced differences emerge in each locality. Upon reaching the project’s culmination, three significant findings come to light. 1) *Defining social mechanisms for utilizing cultural capital*: the research uncovers three distinct forms and mechanisms for utilizing and enhancing cultural capital. We can differentiate the cultural capital discussed in this research project into two groups, tangible and intangible cultural capital. Tangible cultural capital includes elements such as the water source location in Wiang Chet Lin, remnants of the ancient city wall of Wiang Chet Lin, temples and monasteries in the Hua Wiang area, the craftsmanship of *sapao*, and the production of lacquerware and *nam-nang* in the Nantaram community, as well as various traditional foods found along the waterways from the Phaya Kham Canal. Intangible cultural capital, on the other hand, encompasses aspects like the concept of selecting settlement locations for Wiang Chiang Mai in relation to the landscape and waterway system, the Lanna people’s knowledge of water management, and beliefs and cultural practices associated with the Yi Peng tradition, among others. These mechanisms involve various stakeholders, ranging from governmental agencies to community-led initiatives, each contributing to the preservation and promotion of cultural heritage. 2) *Focusing on the role of cultural capital in urban development*: through comprehensive analysis, the study elucidates the pivotal role of cultural capital in urban development. It highlights how cultural assets, traditions, and knowledge serve as crucial drivers of economic growth, community cohesion, and sustainable urban planning strategies. 3) *Embracing the power of storytelling and narratives*: a key revelation is the potent influence of storytelling and narratives in shaping cultural identity and fostering community engagement. By leveraging compelling narratives, the project demonstrates how cultural heritage can be effectively communicated, preserved, and revitalized, thereby strengthening social bonds and fostering a sense of belonging. These findings underscore the multifaceted significance of cultural capital in community development and urban revitalization efforts, emphasizing the importance of integrating cultural preservation into broader urban planning frameworks.

Three Forms of Social Mechanisms for Utilizing Cultural Capital

The research journey, spanning from the historical context of the city to the micro-level dynamics within communities, has led to the identification of cultural capital emerging from waterways and their relationships with diverse communities. This exploration culminated in the delineation of five distinct study areas. However, within each area, the internal processes vary significantly. This discrepancy can be attributed to the differing levels of governmental intervention and community engagement in managing cultural capital. In some communities, cultural capital is subject to governance structures, policies, or initiatives that were once instrumental in advancing community development. However, these policies may have become sporadic or weakened over time. For instance, while certain communities benefited from government-driven initiatives like the One Tambon One Product (OTOP) program, others received minimal attention, if any. Consequently, the traces of cultural capital within each community are disparate, necessitating tailored approaches for enhancement and value addition through design interventions.

Understanding these variances is crucial, as they delineate three distinct forms and mechanisms of cultural capital management. 1) *Governmental-based cultural management mechanism*: this model primarily revolves around the management and oversight of cultural capital by government agencies or entities. Traces of governmental intervention are prominent in shaping cultural preservation and promotion efforts within these communities. 2) *Community-based cultural management mechanism*: by contrast, certain communities exhibit minimal government influence, with community members taking the lead in managing and safeguarding cultural assets. Here, community-driven initiatives play a central role in preserving and enhancing cultural heritage. 3) *Mixed-mode of cultural management mechanisms* this model represents a hybrid approach, where both government agencies and community stakeholders collaborate closely in managing cultural capital. This collaborative framework fosters synergistic efforts to leverage resources, expertise, and community engagement for effective cultural preservation and promotion. By discerning these distinct management mechanisms, stakeholders can tailor strategies and interventions that align with the specific needs and dynamics of each community, ultimately fostering sustainable cultural development and heritage preservation.

The governmental-based cultural management mechanism is evident in study area 1, Wiang Chet Lin, where government agencies play a central role in overseeing cultural capital preservation and promotion. Currently, there is a lack of community involvement in the daily life of Wiang Chet Lin, and the area is divided due to urban development initiatives such as the construction of Sriwichai Road in 1934. Despite efforts to connect these fragmented areas through the Wiang Chet Lin Coffee Council, proactive policies for building and restoring cultural capital are lacking. In study area 3, focusing on Mae Ping and *sapao*, the collaboration between the research team and government agencies like the Chiang Mai Municipality reflects a renewed interest in promoting cultural heritage. Previously, promotion efforts had stagnated, but recent revitalization initiatives, coupled with support from the Education Office of Chiang Mai Municipality, have reignited interest in *sapao*. This collaborative approach has led to the integration of *sapao* into cultural events like the Yi Peng tradition, demonstrating the positive impact of government involvement in cultural capital enhancement efforts.

The community-based cultural management mechanism is evident in study area 2, focusing on the Hua Wiang Nong Bua community, and study area 4, focusing on the Lam Khu Wai Nantaram community. In these areas, the communities play a central role in safeguarding cultural capital, which is deeply integrated into their way of life. Cultural practices, traditions, and livelihoods are closely tied to

the community's identity, such as food and clothing traditions in the Shan community and the artisanal practices of making lacquerware and leather products. While there may be some government support, such as promoting One Tambon One Product (OTOP) initiatives, the motivation behind these policies may be waning, leading to inconsistent care for cultural capital. However, if there were mechanisms for collaboration between the government and community-based initiatives, there could be significant support for the preservation and enhancement of cultural capital. For instance, government support for community festivals, promoting traditional events like Poi Sang Long, or integrating cultural products into soft power policies could greatly benefit the management of cultural capital in these areas. By leveraging the strengths of both government and community efforts, the management of cultural capital could become more effective and sustainable.

The mixed-mode of cultural management mechanism is observed in study area 5, focusing on Lam Mueang Phaya Kham. In this area, there is collaboration between government agencies like the Royal Irrigation Department and various sub-district administrative organizations, as well as local communities along the Lam Mueang Phaya Kham river basin. This collaboration is facilitated through the "Network for Developing Knowledge in the Phaya Kham Weir Basin Area" (K.C.C.). While the traditional weir-mining contract system has weakened due to changes in water management practices, there are still efforts to preserve and promote the valuable knowledge associated with water management in the region. The community's reliance on modern water management methods like tap water and groundwater drilling has led to a gradual shift away from traditional practices. However, there is recognition of the importance of preserving this knowledge, especially for future generations.

The research team aims to expand and promote these efforts through the design process, such as creating community tourism maps and board games for children and youth. By promoting and supporting networks to develop knowledge in the Lam Mueang Phaya Kham basin area, the goal is to revitalize the weir mining system and ensure that the cultural knowledge associated with water management becomes a model for integrated cultural management work. Through this collaborative approach, the cultural capital of the area can be preserved and promoted effectively.

Discussion

The Role of Cultural Capital in Urban Development

Indeed, the concept of "cultural capital" extends beyond physical boundaries and encompasses various dimensions, including historical, social, economic, cultural, and political contexts. While tangible cultural assets such as landmarks, artifacts, and traditions are essential components of cultural capital, it also includes intangible elements like knowledge, customs, and values that are passed down through generations. When considering the spatial dimension of cultural capital, it's essential to recognize that it transcends mere physical space. Cultural capital exists within abstract spaces that connect communities and their cultural heritage across geographical and administrative boundaries. These abstract spaces encompass shared experiences, identities, and connections that shape the collective identity and heritage of a community. Cultural capital represents more than just the physical and tangible aspects of a community's culture. It encompasses the richness of its history, the vibrancy of its traditions, and the resilience of its people, all of which contribute to its cultural identity and significance. Therefore, understanding and

preserving cultural capital requires acknowledging its multidimensional nature and recognizing the interconnectedness of communities and their cultural heritage beyond physical boundaries.

Indeed, cultural capital has the potential to bridge divides and overcome the limitations imposed by administrative boundaries and government agency areas. In the context of this research, it's evident that the division of study areas is not based on cultural capital but rather on administrative or management systems. Administrative divisions, such as those imposed by government agencies or road networks, may disrupt the natural flow and interconnectedness of cultural capital within communities (Figure 12). However, cultural capital itself remains rooted in the shared values, traditions, and meanings that transcend these artificial divisions. While administrative boundaries may separate communities physically, cultural capital serves as a unifying force that can reconnect fragmented areas and foster a sense of belonging and shared identity. By recognizing and preserving cultural capital, communities can reclaim and reinforce the connections that have been disrupted by modern systems and administrative constraints.

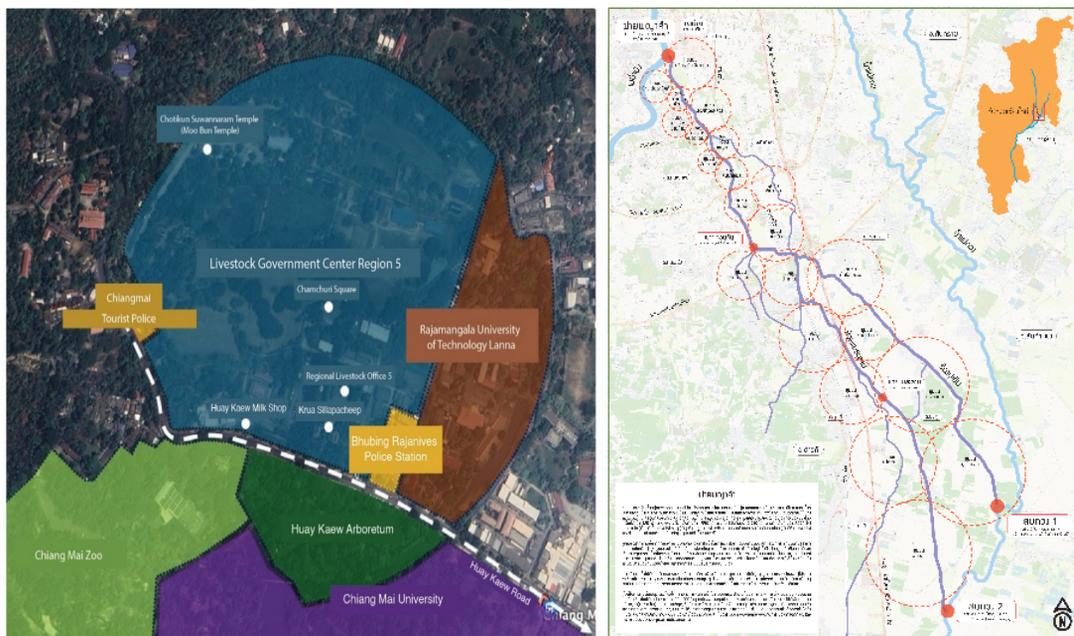


Figure 12 According to the government agencies that currently occupy the area, the picture on the right is a map of Lam Mueang Phaya Kham that flows through the area of many communities and various units of local government. (Graphic by research team, 2024)

Therefore, cultural capital plays a vital role in reconnecting disjointed areas and restoring the holistic understanding of community heritage and identity. It serves as a reminder of the enduring values and traditions that bind communities together, transcending the limitations imposed by administrative divisions. Indeed, cultural capital serves not only to overcome the limitations imposed by divided administrative areas but also as a powerful tool for development and collaboration. By leveraging the shared values and meanings embedded in cultural capital, various stakeholders can come together to foster cooperation, exchange knowledge, and promote sustainable development.

Here are some examples of how cultural capital can be utilized as tools for development. 1) *Knowledge exchanging and sharing*: different government departments and agencies can exchange knowledge and expertise related to cultural capital. This interdisciplinary approach can help bridge gaps

in understanding and lead to more holistic and effective management of cultural resources. 2) *Workshops and collaborative initiatives*: organizing workshops and collaborative initiatives can provide opportunities for stakeholders from diverse backgrounds to come together, share insights, and brainstorm innovative solutions for preserving and promoting cultural capital. These activities can foster a sense of ownership and collective responsibility for cultural heritage conservation. 3) *Cultural tourism routes*: developing cultural tourism routes that highlight significant cultural landmarks and heritage sites can attract visitors while also raising awareness about the importance of preserving cultural capital. These routes can be designed to offer immersive experiences that engage visitors with the local culture and traditions, thereby fostering appreciation and respect for cultural diversity. By embracing cultural capital as a catalyst for collaboration and development, communities can unlock new opportunities for economic growth, social cohesion, and sustainable cultural preservation. Moreover, by involving children and youth in these initiatives, we can ensure that future generations inherit and cherish their cultural heritage for years to come.

The Power of Plot and Storytelling

While the research may still maintain its core structure and storyline, the absence of any one study area could potentially impact the comprehensiveness and depth of the findings. Here's how the absence of a study area might affect the research. 1) Each study area likely contributes unique insights and perspectives to the overall understanding of cultural capital in Chiang Mai. The absence of a study area could result in gaps in the research, leading to an incomplete picture of the cultural landscape and its relationship with the environment. 2) Each study area likely represents different communities, cultural practices, and environmental contexts. Without one of these study areas, the research may lack diversity in perspectives and experiences, limiting the richness of the findings. 3) The absence of a study area could limit the researchers' ability to interpret and paraphrase cultural narratives and practices. Each study area likely contributes unique stories and insights that help enrich the interpretation of cultural capital. 4) The absence of a study area could affect the researchers' ability to communicate important cultural and environmental issues to the public. Each study area likely addresses specific challenges and opportunities related to cultural preservation and environmental sustainability. While the core structure and storyline of the research may remain intact, the absence of any one study area could lead to gaps in the research findings and a less comprehensive understanding of cultural capital in Chiang Mai. Therefore, each study area likely plays a crucial role in contributing to the overall richness and depth of the research.

“Nurturing Wiang Khwan” serves as a compelling storyline that not only connects various communities along the river, but also highlights the diverse cultural capital present in the Lanna region. By tracing the journey from the upstream forest to the Phaya Kham canal, the storyline allows for a holistic understanding of the cultural and environmental significance of the river. The creation of the character, “*Nong Sai Nam*,” adds an imaginative and relatable element to the communication of the storyline. Drawing inspiration from Phaya Luang, the character embodies the spirit of abundance and connection to water, making it an effective representative for communicating the message to the public. Moreover, utilizing graphics and visual design elements derived from the storyline enhances the communication of complex ideas and concepts related to the research. By anchoring communication efforts around the core storyline, the research team can effectively engage with diverse audiences and convey the importance of preserving and nurturing Wiang Khwan.

The “storyline” remains unaffected even if one of the five study areas is removed from the research. The storyline represents the overarching narrative of the emergence of Chiang Mai’s cultural capital, rooted in the significance of water as its source. Each study area serves as a reflection of this storyline, showcasing the diversity of cultural capital and its evolution over different periods of time. By including the five study areas, the research demonstrates the multifaceted changes in cultural capital across various communities and historical contexts. It reaffirms the central role of water in shaping the cultural landscape of Chiang Mai and emphasizes its importance as a fundamental element in understanding the region’s heritage and identity.

Conclusion

The goal of cultural capital management in this research extends beyond the mere creation of new community products. Indeed, it emphasizes the integration of these products with the broader dimensions of history, geography, society, culture, and daily life within the community. The research aims to avoid viewing community products in isolation from the people and their way of life. By designing research methods and activities that align with the “storyline” across the five study areas, the goal is to integrate and link products with the community’s way of life. This connection is established through shared values and meanings, thereby fostering a deeper impact on cultural capital promotion. Furthermore, the preparation of the cultural ecosystem is deemed essential, particularly when it is intertwined with the natural ecosystem. Restoring the relationship among cultural, community, and social capital with the local streams (known as *lam mueang*) and the river of Chiang Mai signifies an important milestone for the research team. By revisiting the connection between cultural ecology and natural ecology, the research aims to achieve a comprehensive understanding of Chiang Mai’s cultural landscape and its interplay with the environment.

The research encountered several important challenges in preparing the cultural ecosystem. 1) *Lack of community engagement*: there was a notable absence of individuals within the community who could effectively convey the “storyline.” Currently, most communication efforts are led by the research team. To address this absence, a system and mechanism should be established to empower community members to communicate the storyline themselves. This would help establish a stronger connection between cultural capital and community tourism. 2) *Shortage of cultural capital inheritors*: the research identified a lack of individuals designated as “inheritors of cultural capital.” While some areas had such individuals or institutions like the Sleeping Chaikaew Kwang Learning Center and Lanna Wisdom School, there is an urgent need for further development and learning mechanisms. It is crucial to make the content interesting for younger generations to ensure continuity. 3) *Difficulty in evaluating social impact*: evaluating the social impact using metrics like Social Return on Investment (SROI) posed challenges. Numeric evaluations often lead to interpretations that may not fully capture the value of the activities. Instead of relying solely on SROI, a more holistic approach involving discussion reports could provide a better understanding of the social impact. Addressing these challenges will require concerted efforts to enhance community engagement, nurture cultural capital inheritors, and adopt more comprehensive evaluation methods to assess social impact effectively.

In summary, this article outlines the project research titled, “The Lost of Local Stream: Towards the Revitalization and Management of the Cultural Heritage Arising from the Stream.” Methodologically, there are three main steps applying to each study area. *Cultural mapping*: this step involves connecting various aspects from abstract concepts to concrete realities, spanning from history to geography and from

natural ecosystems to cultural ecosystems. The process also considers factors at both the city and community levels, leading to the selection of five study areas. *Cultural extraction*: the focus is on extracting cultural capital while considering challenges and limitations in promoting it effectively. *Cultural revitalization*: working at the community level, this step aims to enhance the selected cultural capital of each study area through a design process. The goal is not merely to create aesthetically pleasing or profitable products, but rather to integrate ideas and create a cohesive story line that supports cultural forces. This process is essential for preparing the cultural ecosystem to raise cultural capital effectively. Overall, the research serves to compile history and geography while encouraging community members to overcome limitations in designing modern and appealing community products. The ultimate aim is to foster the integration of ideas and create a cultural ecosystem conducive to maximizing the impact of cultural capital.

The issue of the major flood that occurred in October 2024 is a critical topic closely related to urban systems and water management. However, the author intends for the objectives and scope of this article to remain focused, specifically on social mechanisms for managing cultural capital derived from the research conducted. The research team acknowledges that the water management aspect requires further exploration in the second phase of the research. This includes creating a more comprehensive and detailed dataset on water systems, demonstrating the connections between communities, geography, and both traditional and modern water management systems. The aim is to prepare for and prevent future challenges while fostering sustainable conservation and development of cultural capital.

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