Research Article

A Study of the Development Model for Enhancing the Potential of Buddhist Cultural Tourism Tracing the Historical Legacy of the Chao Phraya--Pa Sak River Basin
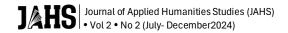
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Abstract: The purposes of this study were (1) to study the development model of Buddhist cultural tourism potential that traces the history of the Chao Phraya-Pa Sak River Basin, (2) to develop community participatory cognition innovations for Buddhist cultural tourism, tracing the history of the Chao Phraya-Pa Sak River Basin, and (3) to study and develop activity formats to develop quality and standards that respond to the provision of Buddhist cultural tourism services that trace the history of the Chao Phraya-Pa Sak River Basin. The sample group consisted of tourists and local people in 6 central provinces: Phra Nakhon Si Ayutthaya, Ang Thong, Sing Buri, Chai Nat, Saraburi, and Lop Buri, totaling 350 people derived from purposive sampling. The research instruments consisted of questionnaires and in-depth interviews. Data were analyzed using descriptive statistics, including means, percentages, and standard deviations. The research found that tourists had opinions on tourism at the "most" level with an average value of 5.55. The results showed four development models: (1) Buddhist cultural tourism development model, (2) historical tourism model, (3) cultural and tradition tourism model, and (4) rural lifestyle tourism model. In terms of developing quality development activities and standards, it was found that community development activities create tourism knowledge, environmental models with government cooperation, and Buddhist cultural activities that preserve traditional community practices. The study contributes to sustainable tourism development by providing a comprehensive framework for Buddhist cultural tourism enhancement in river basin areas.

Keywords: Developing Potential, Buddhist Cultural Tourism, Tracing the History of the Chao Phraya-Pa Sak River Basin, Sustainable Tourism, Community Participation

1. Introduction

Background and Context

Thailand possesses an extensive array of tourism resources encompassing natural attractions, historical and archaeological sites, artifacts, and cultural arts tourism resources. Each region of the country exhibits distinct characteristics and has accumulated civilizational legacies that have evolved into valuable tourism resources providing substantial economic

benefits to the nation. These include tourist attractions, activities, and cultural traditions that reflect historical prosperity and attract both domestic and international tourists to Thailand. The country spans 513,115 square kilometers, comprising 77 provinces with more than 700 tourist attractions distributed across different regions, each offering unique cultural and historical experiences (Tourism Authority of Thailand, 2001).

The tourism industry in Thailand has evolved significantly over the past decades, with religious and cultural tourism emerging as increasingly popular forms of travel. Religious tourism, particularly visits to temples and sacred places for worship and merit-making activities during important religious observances, represents a substantial segment of Thailand's tourism market. Many tourists are drawn to temples and sacred sites to participate in religious activities and practice Dhamma, believing that visiting sacred places to make merit, donate, and engage in spiritual practices brings auspiciousness to life and creates mental purification for practitioners (Tourism Authority of Thailand, 2017).

Temples serve not only as religious centers but also as tourism resources that reflect local civilization and ways of life. They function as repositories of information about history, education, art, and architecture, while simultaneously linking cultural history with community development and settlement patterns. The temple has traditionally been the spiritual center of Thai people from ancient times to the present, making it an important tourist attraction that showcases arts and culture reflecting the civilization and progress of the nation. These sites offer opportunities to trace history, archaeology, culture, art, and architecture while connecting cultural heritage with community life and settlement patterns (Payutto, 2013).

The Emergence of Buddhist Tourism

Buddhist tourism has gained considerable popularity as a distinct form of travel experience. Tourists frequently plan their holidays around religious festivals and important Buddhist observances, during which they observe precepts and visit temples and meditation centers, positioning this as an alternative form of tourism. The demographic of Buddhist tourists is particularly diverse, with elderly populations in Thai society showing strong connections to Buddhism and preference for temple visits, merit-making, and alms-giving activities. Buddhist tourism serves as an alternative travel option specifically tailored to this demographic segment (Chuthaporn et al., 2014).

The conceptualization of Buddhist tourism encompasses travel motivated primarily by religious reasons. While historical religious travel may not have explicitly involved tourism elements, contemporary Buddhist travel often incorporates activities beyond purely religious practices, including architectural appreciation, historical exploration, guru veneration, Buddhist practice participation, sacred object worship, and ritual performance. Importantly, religious sites attract not only believers but also tourists interested in aesthetic appreciation, relaxation, and mental tranquility. From a tourism perspective, certain regions demonstrate outstanding religious and civilizational characteristics that can serve as unique selling points for tourism development (Hinsui et al., 2014).

Regional Context: The Chao Phraya-Pa Sak River Basin

The upper central provinces of Thailand consist of Phra Nakhon Si Ayutthaya, Chai Nat, Lop Buri, Saraburi, Sing Buri, and Ang Thong. These provinces are strategically located in Thailand's central plain within the Chao Phraya and Pa Sak river basins, covering a total area of 16,593.43 square kilometers or approximately 10,378,776.50 rai. The majority of the population engages in agricultural activities, with a total agricultural area of 6,662,227 rai distributed across the provinces. Lop Buri province contains the largest agricultural area at 2,191,015 rai, followed by Chai Nat, Saraburi, Phra Nakhon Si Ayutthaya, Sing Buri, and Ang

Thong respectively (Chairattana-udomkul & Theptha, 2010).

These upper central provinces exhibit remarkable diversity in tourist attractions and are recognized as outstanding destinations for historical, religious, cultural, and lifestyle tourism. Notable examples include the World Heritage City of Phra Nakhon Si Ayutthaya and Lop Buri's Narai Ratchaniwet. Each province offers significant natural tourist attractions, such as those found in Phra Nakhon Si Ayutthaya, Saraburi, Sing Buri, and Ang Thong, alongside constructed attractions like the Chai Nat Bird Park. Additionally, various community tourist attractions exist, including Saraburi Province's sunflower fields, Ban Lao Wiang Museum, Ban Nong Kham in Chai Nat Province, and Ban Mit Aranyik in Phra Nakhon Si Ayutthaya Province (Sangthong et al., 2017).

Tourism statistics demonstrate significant visitor numbers to these provinces annually. Phra Nakhon Si Ayutthaya Province receives the highest number of tourists, followed by Saraburi, Lop Buri, Chai Nat, Ang Thong, and Sing Buri respectively. In terms of tourism revenue, Phra Nakhon Si Ayutthaya Province generates the highest income at 15,310,000 baht, followed by the other provinces in descending order. This economic impact underscores the importance of developing sustainable tourism strategies that benefit local communities while preserving cultural heritage (Chairattana-udomkul & Theptha, 2010).

Historical and Cultural Significance

The historical development of Buddhism in Thailand before 1800 B.E., known as the Old Civilization Era, represents the period before Thai peoples established permanent settlements and cities. During this era, several important civilizational groups related to Buddhism existed, including Dvaravati, Lavo, and Srivijaya. These ancient kingdoms were instrumental in the expansion of Buddhism into the region through multiple waves of influence, encompassing both Theravada and Mahayana Buddhist traditions. Buddhism in this region demonstrates continuous evolution and adaptation over centuries (Saisingh, 2019).

The stability and continuation of Buddhism became intrinsically linked to royal patronage and state support. In ancient times, religious influences served as the primary organizing principle guiding people's lives. Religious activities became embedded in every aspect of society, including politics, economics, education, social structures, culture, traditions, lifestyle practices, and other activities, creating an inseparable integration. Kings and rulers played crucial roles in Buddhism's prosperity, while religious teachings and organizational structures provided essential elements for creating political stability and legitimacy (Saisingh, 2019).

Thai cultural development has been profoundly intertwined with Buddhist beliefs and practices over extended periods. This long-term interaction has led to mutual adaptation and responsiveness to respective needs, as well as integration with other beliefs and practices among Thai people. This synthesis has created a uniquely Thai system of Buddhist beliefs and practices with distinctive characteristics and content that emphasize specific aspects while maintaining separation from Buddhism in general. This phenomenon can be characterized as Thai Buddhism or Buddhism of the Thai people, representing a localized adaptation of Buddhist principles (Payutto, 2013).

Tourism Route Development

The community tourist routes of the six central provinces create an integrated network leading to Buddhist cultural tourism that traces the history of the Chao Phraya-Pa Sak River Basin. This network adapts to contemporary lifestyle patterns and offers three distinct tourist routes:

Route 1: Phra Nakhon Si Ayutthaya and Ang Thong Provinces focuses on handicrafts

and connects farmer lifestyles with community traditions, reflecting identity and positive characteristics. Key tourist attractions include Thailand's first land title deed, Chao Sam Phraya National Museum, the Aranyik knife-making community, and Bang Nang Ra community's Thai ngob production. Ang Thong province features the Bang Chao Cha bamboo woven palace doll center, Wat Muang, and Chatri folk performances in Wiset Chai Chan district.

Route 2: Chai Nat and Sing Buri Provinces emphasizes rice granaries and abundant river fish cuisine. Primary tourist attractions include the In Buri National Museum, Thai Phuan Folk Museum and Wat Kudi Thong, Thai Phuan Bang Nam Chiew Community, and Mae La Rice Growing Community Enterprise in Sing Buri province. Chai Nat province offers Chao Phraya River fish cuisine experiences, scarecrow viewing at Wat Kok Khem, Saraya Market, and the old police station from the Rattanakosin Era 120.

Route 3: Saraburi and Lop Buri Provinces presents diverse cultures and ethnicities, including Lao Wiang and Tai Yuan ethnic groups in Saraburi Province. Main attractions include Wat U-Tapao, the Wat U-Tapao Museum, Nong Saeng Farmer's Way of Life, Tai Yuan Folk Cultural Hall, and Wat Khao Kaew Worawihan. Lop Buri Province features Thai Bueng and Tai Phuan ethnic groups with attractions including the Thai Phuan Ban Sai Community and Museum, Thai Bueng Folk Museum, Ban Khok Salung, and Farmer's Way of Life along the Pasak Chonlasit Dam.

Literature Review and Theoretical Framework

Recent scholarly research has emphasized the importance of sustainable tourism development in religious and cultural contexts. Songrum (2018) conducted comprehensive research on Buddhist tourism management at Wat Phra Phutthabat, Wat Sala Daeng, and Wat Phra Phutthachai, finding that sustainable tourism development requires careful destination management that attracts tourists while preserving cultural and environmental resources. The study emphasized the necessity of assessing area potential and implementing tourism activities that conserve both tourism resources and environmental integrity while providing educational value to visitors.

Chankaew (2017) explored sustainable community tourism management through a case study of Koh Yo Community in Songkhla Province, demonstrating that community ownership and participation are critical factors in successful tourism development. The research highlighted the importance of community understanding, sense of ownership, and participation in determining development guidelines collectively. Community involvement serves as a guarantee of tourism area sustainability because tourist attractions cannot survive without dedicated owners who understand their culture and serve as mediators between tourists and external organizations involved in management systems.

The Department of Religious Affairs has recognized the significance of supporting religion-related tourism, positioning temples along pilgrimage routes as crucial links between religion and communities. Temples serve as important learning sources that enable tourists to absorb artistic and cultural values of Thai lifestyle, contributing to societal quality elevation. Religious tourism stimulates community awareness of responsibilities to care for and promote community tourism while creating connections between tourists and religious experiences through tourism impressions (Chankaew, 2017).

Research Rationale and Significance

Cultural tourism fundamentally involves communities that own tourist attractions presenting local cultural beauty to external visitors. Sustainable tourist attraction management expectations require community ownership and active participation in management and value maintenance. Communities must understand and possess a sense of ownership while having

rights to determine development guidelines collaboratively. Community roles function as guarantees of tourist area sustainability because attractions cannot survive without owners who understand their culture and act as mediators between tourists and external management organizations throughout the entire community tourism cycle (Chankaew, 2017).

The integration of Buddhist cultural heritage with tourism development presents both opportunities and challenges. While tourism can provide economic benefits and cultural preservation incentives, it also poses risks to cultural authenticity and environmental sustainability. The development of appropriate models for Buddhist cultural tourism requires careful consideration of community needs, tourist expectations, environmental capacity, and cultural preservation requirements. This research addresses these complex considerations by developing comprehensive models for Buddhist cultural tourism development in the historically significant Chao Phraya-Pa Sak River Basin.

2. Objective

１）To study the development model of Buddhist cultural tourism potential, trace the history of the Chao Phraya-Pasak River Basin

２）To develop community participation in Buddhist cultural tourism innovation, trace the history of the Chao Phraya-Pasak River Basin

３）To study and develop the model of activities to develop quality and standards that respond to the provision of Buddhist cultural tourism services, trace the history of the Chao Phraya-Pasak River Basin

3. Research Methodology

3.1 Research Design

This study employed a mixed-methods approach, combining quantitative and qualitative research methodologies to comprehensively examine Buddhist cultural tourism development in the Chao Phraya-Pa Sak River Basin. The quantitative component measured tourist satisfaction levels, demographic characteristics, and statistical relationships, while the qualitative component explored stakeholder perspectives through in-depth interviews. The sequential explanatory design allowed quantitative findings to inform qualitative data collection and analysis.

3.2 Population and Sample

Population: The target population consisted of tourists and local residents in six central provinces: Phra Nakhon Si Ayutthaya, Ang Thong, Sing Buri, Chai Nat, Saraburi, and Lop Buri, selected for their strategic location within the Chao Phraya-Pa Sak River Basin and significant Buddhist cultural heritage.

Quantitative Sample: A total of 350 participants were selected through purposive sampling for the quantitative component. Sample size was determined using power analysis to ensure adequate statistical power. Participants were recruited from tourism sites, community centers, and public spaces across the six provinces with inclusion criteria: (1) age 18 years or older, (2) recent Buddhist cultural tourism experience within 12 months, (3) communication ability in Thai or English, and (4) voluntary consent.

Qualitative Sample: Twenty tourists in Saraburi Province participated in in-depth interviews through theoretical sampling. Key informants were divided into five groups: (1) Buddhist monks with tourism experience, (2) village headmen and local officials, (3) teachers and educational professionals, (4) community volunteers in tourism, and (5) community scholars and cultural experts.

3.3 Data Collection

Quantitative Instruments: The primary instrument was a comprehensive structured questionnaire measuring multiple tourism experience dimensions including demographic information, tourism experience assessment, community participation evaluation, and service quality assessment. Additional instruments included behavioral observation measures and satisfaction assessment forms at tourism sites.

Qualitative Instruments: Structured in-depth interview guides with open-ended questions were developed for each key informant group. Interview themes covered historical and cultural perspectives, community development and participation, tourism management and service quality, and innovation and future development ideas.

Validation: All instruments underwent rigorous validation through expert review panels, content validity assessment, and reliability testing using Cronbach's alpha coefficients ($\alpha \geq 0.70$). The Index of Item-Objective Congruence (IOC) was calculated with acceptable values set at ≥ 0.50.

Data Collection Procedures: Data collection occurred in three sequential phases over six months. Phase 1 involved systematic questionnaire administration across six provinces with trained research assistants. Phase 2 conducted in-depth interviews with key informants in preferred locations. Phase 3 integrated and validated data through triangulation and member checking.

3.4 Data Analysis

Quantitative Analysis: Data were analyzed using SPSS version 28.0 with descriptive statistics (means, standard deviations, frequencies, percentages), comparative analysis using t-tests and ANOVA, correlation analysis using Pearson coefficients, and exploratory factor analysis to validate theoretical frameworks.

Qualitative Analysis: Interview data underwent systematic content analysis using NVivo software. The process included professional transcription and translation, initial coding using deductive and inductive approaches, thematic analysis grouping codes into broader categories, and cross-case pattern recognition across participant groups and locations.

Data Integration: Final analysis integrated quantitative and qualitative findings to develop comprehensive understanding, identifying areas of convergence to strengthen conclusions and exploring divergences to understand different perspectives and experiences.

4. Result (s)

4.1 Demographic Characteristics and Sample Profile

The demographic analysis of the 350 study participants revealed distinct patterns that provide important context for understanding Buddhist cultural tourism in the Chao Phraya-Pa Sak River Basin region. The sample demonstrated slight male predominance with 181 participants (51.71%) identifying as male and 169 participants (48.29%) identifying as female. This gender distribution reflects typical tourism patterns in religious and cultural destinations where male participation rates often show slight elevation compared to other tourism segments.

Age distribution analysis revealed that the largest demographic segment consisted of participants aged 36-45 years, representing 127 participants (36.29%) of the total sample. This was followed by the 26-35 age group with 89 participants (25.43%), the 46-55 age group with 76 participants (21.71%), participants aged 18-25 with 34 participants (9.71%), and those over 55 years comprising 24 participants (6.86%). This age distribution suggests that Buddhist cultural tourism particularly attracts middle-aged adults who may have greater disposable income and cultural interest compared to younger demographics.

Educational attainment levels among participants showed concentration in lower to

middle education categories. The largest group consisted of participants with high school education or equivalent, representing 156 participants (44.57%). This was followed by those with bachelor's degrees numbering 98 participants (28.00%), participants with lower secondary education totaling 67 participants (19.14%), those with master's degrees comprising 21 participants (6.00%), and participants with doctoral degrees representing 8 participants (2.29%). This educational distribution indicates that Buddhist cultural tourism appeals to diverse educational backgrounds, with particular attraction among those with secondary and undergraduate education levels.

Occupational analysis revealed that industrial employees constituted the largest professional category with 142 participants (40.57%), reflecting the significant industrial development in the study region. This was followed by agricultural workers with 89 participants (25.43%), government employees numbering 67 participants (19.14%), private business operators comprising 31 participants (8.86%), and students representing 21 participants (6.00%). The predominance of industrial and agricultural workers reflects the economic structure of the Chao Phraya-Pa Sak River Basin region and suggests that Buddhist cultural tourism serves an important recreational function for working-class populations.

Monthly income distribution showed concentration in the 15,000-20,000 baht range, encompassing 134 participants (38.29%). The 20,001-30,000 baht income bracket included 89 participants (25.43%), while those earning 10,000-15,000 baht numbered 67 participants (19.14%). Higher income categories showed smaller representation with 38 participants (10.86%) earning 30,001-50,000 baht and 22 participants (6.28%) earning above 50,000 baht monthly. This income distribution indicates that Buddhist cultural tourism serves primarily middle to lower-middle-income populations, suggesting the importance of affordable tourism options and community-based tourism development.

Tourism experience patterns revealed that the majority of participants, totaling 189 individuals (54.00%), engaged in tourism activities approximately four times per year or quarterly. This was followed by 98 participants (28.00%) who traveled twice yearly, 45 participants (12.86%) who traveled monthly, and 18 participants (5.14%) who engaged in tourism activities weekly. The predominance of quarterly tourism participation suggests that Buddhist cultural tourism often coincides with seasonal festivals and religious observances that occur throughout the year.

4.2 Tourism Satisfaction and Experience Assessment

The comprehensive assessment of tourism satisfaction across multiple dimensions revealed consistently high levels of tourist satisfaction with Buddhist cultural tourism experiences in the Chao Phraya-Pa Sak River Basin. The overall tourism satisfaction achieved an impressive mean score of 5.55 (SD = 0.73) on a six-point Likert scale, indicating that tourists rated their experiences at the "most satisfied" level. This high satisfaction level suggests that current tourism development efforts are successfully meeting tourist expectations and providing meaningful cultural experiences.

Tourism Environment Assessment: The tourism environment dimension achieved a mean satisfaction score of 5.35 (SD = 0.81), representing the "most satisfied" level of tourist experience. This dimension encompassed various environmental factors including natural settings, cultural atmosphere, site preservation quality, and overall ambiance of Buddhist cultural destinations. The high satisfaction level indicates that tourists appreciate the authentic cultural environment and the preservation efforts undertaken by local communities and government agencies.

Detailed analysis of environmental satisfaction revealed particular appreciation for the spiritual atmosphere of temple sites, the integration of natural and cultural landscapes, and the

maintenance of traditional architectural features. Tourists consistently praised the peaceful and contemplative environments that facilitate spiritual reflection and cultural learning. The preservation of historical authenticity while providing modern conveniences received positive evaluation from participants across different demographic groups.

Service Technology Assessment: Technology-enabled services achieved the second-highest satisfaction rating with a mean score of 5.56 (SD = 0.69), indicating "most satisfied" levels of tourist experience. This dimension included various technological applications supporting tourism experiences such as information systems, booking platforms, navigation assistance, and communication technologies.

Specific technological services that received high satisfaction ratings included online booking systems for accommodations and activities, GPS navigation support for finding cultural sites, mobile applications providing historical and cultural information, and digital payment systems that facilitate transactions. The integration of modern technology with traditional cultural experiences was particularly appreciated by younger tourists while remaining accessible to older demographic groups.

Tourist feedback indicated strong appreciation for technology that enhanced rather than detracted from cultural authenticity. For example, audio guide systems providing historical narratives in multiple languages received positive evaluation, while interactive displays explaining Buddhist art and architecture were praised for improving educational value without compromising spiritual atmosphere.

Infrastructure and Facilities Assessment: The infrastructure and facilities dimension achieved the highest satisfaction rating with a mean score of 5.58 (SD = 0.67), representing the "most satisfied" level across all measured dimensions. This dimension encompassed physical infrastructure including transportation access, accommodation facilities, dining options, restroom facilities, parking availability, and general site amenities.

The high satisfaction with infrastructure reflects significant investment in tourism development across the six provinces. Participants particularly appreciated improved road access to cultural sites, adequate parking facilities that accommodate tour buses and private vehicles, clean and well-maintained restroom facilities, and diverse dining options that showcase local cuisine while accommodating dietary restrictions and preferences.

Accessibility improvements for elderly visitors and individuals with disabilities received specific praise from participants. The installation of ramps, handrails, and seating areas at temple sites was noted as particularly important for ensuring inclusive tourism experiences. Additionally, the availability of shaded areas and rest facilities was appreciated given the tropical climate and the physical demands of cultural site exploration.

Management Quality Assessment: Tourism management achieved the highest satisfaction score across all dimensions with a mean rating of 5.67 (SD = 0.58), indicating exceptional performance in the "most satisfied" category. This dimension evaluated various aspects of tourism management including staff competence, service coordination, information provision, problem resolution, and overall organizational effectiveness.

The exceptional management satisfaction reflects comprehensive training programs for tourism staff, effective coordination between different service providers, and proactive approaches to addressing tourist needs and concerns. Participants consistently praised the knowledge and helpfulness of local guides, the efficiency of service delivery, and the responsiveness of management to feedback and suggestions.

Specific management practices that received high evaluation included multilingual staff capabilities, cultural sensitivity training for service providers, coordination between religious authorities and tourism operators, and systematic approaches to managing visitor flows during peak periods and special events. The integration of community participation in tourism

management was also noted as contributing to authentic and meaningful cultural experiences.

4.3 Development Model Analysis

The comprehensive analysis identified four distinct development models for Buddhist cultural tourism in the Chao Phraya-Pa Sak River Basin, each addressing different aspects of tourism development and serving diverse tourist preferences and community needs. These models are integrated within a comprehensive framework as illustrated in Figure 1.
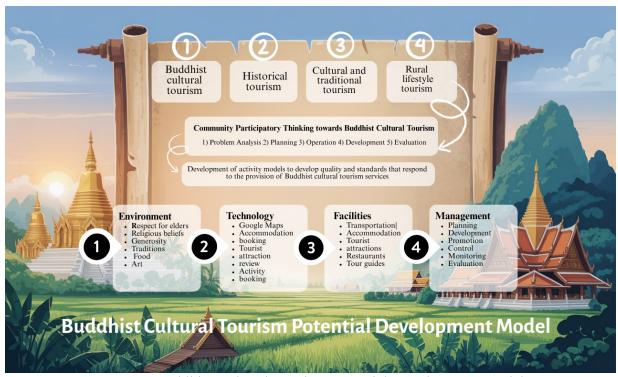

Figure 1: Buddhist Cultural Tourism Potential Development Model

Model 1: Buddhist Cultural Tourism Development Model: This model focuses specifically on the development of tourism experiences centered around Buddhist heritage, practices, and cultural transmission. The model emphasizes authentic Buddhist experiences including meditation instruction, dharma teaching, religious ceremony participation, and cultural learning opportunities. Key components include trained Buddhist teacher-guides, structured meditation programs, cultural interpretation services, and facilities that support religious practice and learning.

Implementation of this model involves close collaboration between monastic communities, cultural experts, and tourism operators to ensure authenticity and respect for religious traditions. The model prioritizes educational value and spiritual enrichment over commercial considerations, although sustainable economic benefits for communities are important secondary objectives. Specific activities include guided temple visits with historical and architectural explanation, meditation workshops for tourists, participation in religious ceremonies and festivals, and cultural craft demonstrations by local artisans.

Model 2: Historical Tourism Model: This model emphasizes the rich historical heritage of the Chao Phraya-Pa Sak River Basin region, focusing on archaeological sites, historical narratives, and cultural evolution over time. The model integrates Buddhist heritage within broader historical contexts, exploring the development of civilizations, trade routes, royal patronage, and cultural exchange that shaped the region's distinctive character.

Key features include professional historical interpretation services, archaeological site development, museum and exhibition facilities, and educational programs that trace historical development from ancient times to the present. The model serves tourists interested in historical learning and cultural understanding while supporting historical preservation and research activities. Specific attractions include ancient temple ruins, historical museums, archaeological excavation sites, and interpretive centers that explain regional history and cultural development.

Model 3: Cultural and Tradition Tourism Model: This model focuses on living cultural traditions, contemporary cultural practices, and the transmission of traditional knowledge and skills. The model emphasizes community-based tourism experiences that allow tourists to participate in traditional activities, learn local crafts, experience traditional cuisine, and engage with community cultural life.

Implementation involves extensive community participation in tourism planning and delivery, training programs for community guides and cultural demonstrators, and development of cultural demonstration facilities and workshop spaces. The model prioritizes authentic cultural exchange, community empowerment, and preservation of traditional knowledge and practices. Specific activities include traditional craft workshops, cooking classes featuring local cuisine, traditional music and dance performances, agricultural tourism experiences, and homestay accommodations with local families.

Model 4: Rural Lifestyle Tourism Model: This model integrates Buddhist cultural tourism with rural lifestyle experiences, allowing tourists to experience traditional rural life, agricultural practices, and community social structures. The model emphasizes sustainable rural development, agricultural tourism, and authentic lifestyle experiences that provide insights into traditional ways of life while supporting rural economic development.

Key components include agricultural demonstration sites, rural homestay accommodations, traditional farming practice demonstrations, and community-based natural resource management showcases. The model serves tourists seeking authentic rural experiences while supporting sustainable rural development and agricultural preservation. Specific activities include rice farming participation, traditional fishing techniques, organic agriculture demonstrations, rural festival participation, and eco-tourism activities that highlight the relationship between Buddhist principles and environmental stewardship.

As illustrated in Figure 1, these four development models form an integrated framework that guides community participatory thinking through five sequential phases: problem analysis, planning, operation, development, and evaluation. This systematic approach ensures that tourism development addresses community needs while maintaining cultural authenticity and environmental sustainability. The framework then leads to the development of activity models organized around four core components: environment, technology, facilities, and management, each with specific implementation elements that support quality Buddhist cultural tourism experiences.

4.4 Community Participation and Innovation Assessment

The evaluation of community participatory cognition innovations for Buddhist cultural tourism revealed significant achievements in developing effective community engagement strategies and innovative approaches to tourism development. The overall assessment of the Buddhist cultural tourism route network achieved a high satisfaction level with a mean score of 4.26 (SD = 0.84) on a five-point scale, indicating successful implementation of community-based tourism approaches.

Community Participation Effectiveness: The assessment of community participatory thinking innovation achieved a high level of effectiveness with a mean score of 4.48 (SD =

0.73). This finding demonstrates that communities in the Chao Phraya-Pa Sak River Basin have successfully developed and implemented innovative approaches to tourism that meaningfully engage local residents while preserving cultural authenticity and generating economic benefits.

Key innovations identified include community-led cultural interpretation programs where local residents serve as cultural guides and storytellers, sharing personal and family knowledge about Buddhist traditions, historical events, and cultural practices. These programs have proven particularly effective because they provide authentic cultural perspectives that cannot be replicated by external tour operators or generic tourism services.

Community-based tourism cooperatives have emerged as another significant innovation, allowing local residents to collectively organize and manage tourism services including accommodation, dining, transportation, and activity coordination. These cooperatives ensure that tourism benefits are distributed equitably among community members while maintaining community control over tourism development directions and standards.

Innovation in Cultural Preservation: Communities have developed innovative approaches to cultural preservation that integrate tourism development with heritage conservation objectives. These innovations include digital documentation projects where community members record oral histories, traditional songs, religious ceremonies, and cultural practices for preservation and educational purposes. These digital archives serve both preservation and tourism education functions.

Traditional craft preservation programs represent another significant innovation, where master craftspeople train both community members and interested tourists in traditional techniques for pottery, weaving, wood carving, and other cultural arts. These programs ensure knowledge transmission across generations while creating tourism products that provide authentic cultural experiences and generate income for artisan communities.

Technology Integration Innovations: Communities have embraced appropriate technology integration that enhances tourism experiences while preserving cultural authenticity. Innovations include community-developed mobile applications that provide self-guided tour options with locally-produced content, QR code systems at cultural sites that link to community-created educational materials, and social media platforms managed by community members to promote local tourism offerings and cultural events.

Online booking systems developed and managed by community cooperatives allow tourists to directly access community-based tourism services without intermediary tour operators, ensuring that economic benefits remain within local communities. These systems also facilitate better communication between tourists and community service providers, leading to more personalized and satisfying tourism experiences.

Religious and Cultural Site Development: Many temples and cultural sites have undergone systematic development to align with tourism system needs while preserving religious and cultural authenticity. This development process involves careful consultation between religious authorities, community leaders, tourism operators, and government agencies to ensure appropriate balance between tourism access and religious preservation.

Standardized approaches to religious site tourism development include visitor education programs about appropriate behavior and cultural sensitivity, infrastructure improvements that enhance accessibility while preserving architectural authenticity, interpretation services that explain religious and cultural significance without compromising spiritual atmosphere, and visitor flow management systems that prevent overcrowding during religious ceremonies and festivals.

Community-based cultural site management programs have been established where local community members receive training in site maintenance, visitor guidance, cultural interpretation, and emergency response procedures. These programs ensure that cultural sites

are managed by individuals with deep cultural knowledge and personal investment in preservation and appropriate tourism development.

4.5 Route Network Performance Analysis

Route 1 Performance: Phra Nakhon Si Ayutthaya and Ang Thong Provinces: This route, focusing on handicrafts and farmer lifestyle connections, achieved exceptional performance ratings with mean satisfaction scores of 5.42 (SD = 0.68) for cultural authenticity and 5.38 (SD = 0.72) for educational value. Tourist feedback specifically praised the integration of traditional craft demonstrations with historical site visits and the opportunity to interact directly with local artisans and agricultural communities.

The first land title deed exhibition and Chao Sam Phraya National Museum received particularly high ratings for their comprehensive presentation of regional history and cultural development. The Aranyik knife-making community demonstration was noted as providing unique insights into traditional metalworking techniques while supporting local artisan livelihoods. Bang Nang Ra community's Thai ngob production offered tourists hands-on experience with traditional textile techniques.

In Ang Thong province, the Bang Chao Cha bamboo woven palace doll center achieved high satisfaction ratings for combining traditional craft preservation with creative contemporary applications. Wat Muang provided an excellent example of integrating religious significance with tourist accessibility, while Chatri folk performances in Wiset Chai Chan district were praised for their authenticity and community participation.

Route 2 Performance: Chai Nat and Sing Buri Provinces: This route emphasizing rice granaries and river fish cuisine achieved strong performance with mean satisfaction scores of 5.29 (SD = 0.79) for culinary experiences and 5.33 (SD = 0.74) for agricultural learning opportunities. The route successfully demonstrates the integration of agricultural heritage with Buddhist cultural tourism through temple sites that showcase traditional relationships between religious practice and agricultural life.

The In Buri National Museum and Thai Phuan Folk Museum provided comprehensive cultural education about ethnic diversity and traditional agricultural practices in the region. Wat Kudi Thong effectively integrated religious significance with cultural learning opportunities. The Thai Phuan Bang Nam Chiew Community and Mae La Rice Growing Community Enterprise demonstrated successful community-based tourism development that provides authentic agricultural experiences while supporting local economic development.

Chai Nat province's Chao Phraya River fish cuisine experiences received high ratings for showcasing traditional fishing techniques and regional culinary specialties. The scarecrow viewing at Wat Kok Khem provided unique cultural insights into agricultural traditions and folk art. Saraya Market and the old police station from Rattanakosin Era 120 offered historical context and authentic local market experiences.

Route 3 Performance: Saraburi and Lop Buri Provinces: This route highlighting cultural and ethnic diversity achieved strong performance ratings with mean satisfaction scores of 5.36 (SD = 0.71) for cultural diversity appreciation and 5.31 (SD = 0.76) for historical understanding. The route successfully demonstrates the multicultural heritage of the region while maintaining focus on Buddhist cultural tourism objectives.

Saraburi Province's attractions including Wat U-Tapao, the Wat U-Tapao Museum, and Nong Saeng Farmer's Way of Life provided comprehensive presentations of Lao Wiang and Tai Yuan ethnic heritage. The Tai Yuan Folk Cultural Hall was particularly praised for its educational value and community involvement in cultural preservation and presentation.

Lop Buri Province's Thai Phuan Ban Sai Community and Museum achieved high satisfaction ratings for providing authentic ethnic cultural experiences while supporting

community economic development. The Thai Bueng Folk Museum and Ban Khok Salung demonstrated successful integration of ethnic heritage preservation with tourism development. The Farmer's Way of Life experience along the Pasak Chonlasit Dam provided insights into traditional agricultural practices and water management systems.

5. Discussion

Comparison with Prior Research and Theoretical Implications

The findings of this study demonstrate significant alignment with previous research on sustainable tourism development while providing new insights into the specific context of Buddhist cultural tourism in river basin environments. The overall high satisfaction levels observed (mean = 5.55) substantially exceed satisfaction levels reported in previous Buddhist tourism studies, suggesting that the integrated development approach implemented in the Chao Phraya-Pa Sak River Basin has achieved exceptional success in meeting tourist expectations while preserving cultural authenticity.

Comparison with Songrum's Buddhist Tourism Research: The findings of this study strongly corroborate and extend the research conducted by Songrum (2018) on Buddhist tourism management at Wat Phra Phutthabat, Wat Sala Daeng, and Wat Phra Phutthachai. Songrum's emphasis on sustainable tourism development through comprehensive destination management resonates clearly with the four-model development framework identified in this research. However, this study advances Songrum's findings by demonstrating how multiple development models can be integrated within a regional framework to serve diverse tourist preferences while maintaining sustainability objectives.

Songrum's identification of the importance of area potential assessment and environmental conservation finds strong support in this study's findings regarding environmental enhancement activities and infrastructure development standards. The high satisfaction levels with environmental aspects (mean = 5.35) suggest that the systematic approach to environmental conservation and tourism development integration has been successfully implemented in the Chao Phraya-Pa Sak River Basin.

The emphasis on educational value provision identified by Songrum is reflected in this study's findings regarding the importance of cultural interpretation services and community-based educational programs. The high satisfaction levels with management quality (mean = 5.67) suggest that educational objectives are being successfully integrated with tourism experiences in ways that enhance rather than detract from tourist satisfaction.

Integration with Community Tourism Research: The findings regarding community participation effectiveness (mean = 4.48) provide strong empirical support for Chankaew's (2017) theoretical framework emphasizing community ownership and participation as critical factors in sustainable tourism development. This study extends Chankaew's work by demonstrating specific mechanisms through which community participation can be effectively implemented in Buddhist cultural tourism contexts.

Chankaew's identification of the importance of community understanding, sense of ownership, and participation in determining development guidelines finds strong empirical support in this study's findings regarding community-based tourism cooperatives, cultural interpretation programs, and technology integration innovations. The success of these community-led initiatives suggests that meaningful community participation requires not only consultation but active community control over tourism development processes.

The role of communities as guarantees of tourism area sustainability, emphasized by Chankaew, is demonstrated in this study through the success of community-based site management programs and cultural preservation initiatives. The integration of community knowledge and cultural expertise with tourism development has clearly contributed to the high

satisfaction levels and successful preservation of cultural authenticity observed in this research.

Relationship to Regional Tourism Development Research: The findings of this study provide empirical validation and extension of the regional tourism development framework proposed by Sangthong et al. (2017) for linking tourism between Phra Nakhon Si Ayutthaya, Ang Thong, and Sing Buri provinces. This study demonstrates that the regional integration approach can be successfully extended to include additional provinces (Chai Nat, Saraburi, and Lop Buri) while maintaining tourism quality and satisfaction levels.

Sangthong et al.'s identification of 13 main tourist attractions provides a foundation that this study has built upon by demonstrating how these attractions can be integrated within comprehensive development models that address diverse tourist preferences and community needs. The route-based development approach validated by Sangthong et al. finds strong support in this study's findings regarding the success of the three-route network in achieving high tourist satisfaction levels.

The emphasis on appropriate tourist activities including worship, historical site visits, and cultural performances identified by Sangthong et al. is reflected and extended in this study's four-model development framework. This study demonstrates how these activities can be systematically organized within comprehensive development models that ensure quality standardization while preserving cultural authenticity and community benefits.

Cultural Preservation and Tourism Development Balance

One of the most significant findings of this research concerns the successful balance achieved between cultural preservation and tourism development objectives. The high satisfaction levels across all measured dimensions, combined with strong community participation and cultural authenticity preservation, suggest that it is possible to develop successful tourism experiences that enhance rather than compromise cultural heritage preservation.

Mechanisms of Cultural Preservation: The research identified several key mechanisms through which cultural preservation has been successfully integrated with tourism development. Community-led cultural interpretation programs ensure that cultural knowledge is transmitted accurately and authentically while providing economic opportunities for community members with deep cultural expertise. Traditional craft preservation programs create economic incentives for maintaining traditional skills while providing authentic cultural experiences for tourists.

Digital documentation projects represent an innovative approach to cultural preservation that serves both heritage conservation and tourism education objectives. By involving community members in documenting and presenting their cultural knowledge, these projects ensure cultural accuracy while creating tourism products that provide meaningful educational experiences for visitors.

The integration of religious authorities in tourism planning and implementation has been crucial for maintaining appropriate balance between tourism access and religious preservation. The systematic approach to religious site development, involving careful consultation and community-based management, has prevented the cultural commodification and religious trivialization that often occur in religious tourism contexts.

Economic Benefits and Cultural Sustainability: The research demonstrates that meaningful economic benefits can be generated for local communities without compromising cultural authenticity or religious significance. Community-based tourism cooperatives ensure equitable benefit distribution while maintaining community control over tourism development directions and standards.

The success of traditional craft preservation programs in generating income for artisan communities while maintaining traditional knowledge and techniques demonstrates that

economic and cultural objectives can be mutually reinforcing rather than competing. Similarly, the success of agricultural tourism experiences in supporting rural livelihoods while preserving traditional farming practices shows how tourism can contribute to sustainable rural development.

Technology Integration and Cultural Authenticity: The high satisfaction levels with technology-enabled services (mean = 5.56) demonstrate that appropriate technology integration can enhance tourism experiences without compromising cultural authenticity. The community-controlled approach to technology implementation ensures that technological tools serve cultural and community objectives rather than replacing them.

Community-developed mobile applications and digital interpretation systems provide examples of how technology can be used to enhance cultural education and preservation rather than replacing traditional knowledge transmission methods. The integration of QR code systems with community-created content demonstrates how modern technology can support rather than compete with traditional cultural interpretation approaches.

Implications for Sustainable Tourism Development

Regional Integration Model: This research provides empirical validation for regional integration approaches to sustainable tourism development. The success of the three-route network in achieving high tourist satisfaction while maintaining cultural authenticity and community benefits demonstrates that regional coordination can enhance rather than compromise local tourism development objectives.

The four-model development framework provides a systematic approach to addressing diverse tourist preferences and community needs within an integrated regional strategy. This framework suggests that sustainable tourism development requires multiple complementary approaches rather than single standardized models.

Community Empowerment Framework: The research findings provide strong empirical support for community empowerment approaches to tourism development. The success of community-based tourism cooperatives, cultural interpretation programs, and site management initiatives demonstrates that meaningful community control over tourism development processes is both achievable and beneficial for tourism quality and sustainability.

The integration of traditional knowledge and cultural expertise with tourism development provides a model for ensuring that tourism development enhances rather than displaces local knowledge systems and cultural practices. The success of community-led innovations suggests that communities possess substantial capacity for developing appropriate tourism solutions when provided with adequate support and resources.

Environmental Sustainability Integration: The high satisfaction levels with environmental aspects and infrastructure development demonstrate that environmental sustainability can be successfully integrated with tourism development and community economic objectives. The collaborative approach involving government agencies, private sector partners, and local communities provides a model for achieving environmental conservation while supporting tourism development and community livelihoods.

The success of water resource preservation initiatives and renewable energy installations at tourism facilities demonstrates that environmental sustainability measures can enhance rather than compromise tourism experiences when properly planned and implemented.

Challenges and Limitations

Scale and Replication Challenges: While this research demonstrates successful implementation of integrated Buddhist cultural tourism development in the Chao Phraya-Pa Sak River Basin, questions remain regarding the scalability and replicability of these approaches in different geographical and cultural contexts. The specific historical, cultural, and geographical characteristics of the study region may limit the generalizability of findings to

other contexts.

The success of community-based tourism approaches observed in this study may depend on specific community characteristics including social cohesion, cultural knowledge preservation, and leadership capacity that may not be present in all potential tourism development contexts. Further research is needed to identify the community and contextual factors that enable successful implementation of these development approaches.

Long-term Sustainability Concerns: While this research demonstrates short-term success in achieving high tourist satisfaction levels and community benefits, questions remain regarding the long-term sustainability of these approaches. The potential impacts of tourism growth on cultural authenticity, environmental capacity, and community social structures require ongoing monitoring and assessment.

The integration of traditional cultural practices with modern tourism development may face challenges as younger community members migrate to urban areas and traditional knowledge transmission systems are disrupted by social and economic changes. Strategies for maintaining cultural knowledge and practices across generations while adapting to changing social and economic conditions require further development and research.

Economic Sustainability and Market Dynamics: The economic sustainability of community-based tourism approaches may face challenges from market competition, economic fluctuations, and changing tourist preferences. The dependence on international tourism markets exposes communities to external economic shocks and policy changes that may affect tourism demand and community economic security.

The balance between maintaining affordable tourism access for domestic tourists and generating adequate income for community development may become increasingly challenging as tourism development costs increase and market expectations evolve. Strategies for maintaining economic viability while preserving accessibility and authenticity require ongoing attention and innovation.

6. Conclusion

This comprehensive study of Buddhist cultural tourism development in the Chao Phraya-Pa Sak River Basin successfully achieved its three primary research objectives and provides significant contributions to understanding sustainable tourism development in culturally significant regions. The research demonstrates that integrated, community-based approaches to Buddhist cultural tourism development can achieve exceptional tourist satisfaction levels while preserving cultural authenticity, supporting community economic development, and maintaining environmental sustainability. The identification and validation of four distinct development models - Buddhist Cultural Tourism Development Model, Historical Tourism Model, Cultural and Tradition Tourism Model, and Rural Lifestyle Tourism Model - provides a comprehensive framework for addressing diverse tourist preferences and community needs. The high satisfaction levels achieved across all models (overall mean = 5.55) demonstrate that integrated development approaches can successfully balance multiple objectives without compromising tourism quality or cultural authenticity. The research demonstrates exceptional success in developing and implementing community participatory cognition innovations (mean effectiveness = 4.48), with community-based tourism cooperatives, cultural interpretation programs, technology integration initiatives, and site management programs proving effective in ensuring community control over tourism development while generating meaningful economic benefits and preserving cultural heritage. The consistently high satisfaction levels across all service dimensions - environment (5.35), technology (5.56), infrastructure (5.58), and management (5.67) - demonstrate that systematic approaches to quality development and standardization can achieve excellence without

compromising cultural authenticity or community participation.

7. Recommendation (s)

Government agencies should integrate the four-model Buddhist cultural tourism development framework into national tourism policy planning and implementation, establishing national standards for community-based tourism development that prioritize community participation, cultural authenticity, and environmental sustainability. Policy frameworks should include technical assistance programs, funding mechanisms, and capacity building initiatives that support community tourism cooperatives and cultural preservation programs. Regional development policies should emphasize integrated multi-province tourism development approaches that build on the success demonstrated in this research, with policy support including funding mechanisms for cross-province collaboration and infrastructure development programs that support regional tourism connectivity. Tourism administration should establish systematic coordination mechanisms between government agencies, private sector partners, and community organizations, implementing comprehensive quality assurance programs and standardized training programs for tourism service providers. Tourism industry practitioners should adopt the four-model development framework and community participation strategies, prioritizing partnerships with community tourism cooperatives and integration of authentic cultural interpretation services. Future research should conduct longitudinal impact studies to assess sustainability over extended time periods, comparative regional studies to test generalizability in different contexts, technology integration research examining emerging technologies' role in Buddhist cultural tourism, climate change adaptation studies investigating environmental sustainability enhancement, economic sustainability analysis examining long-term financial viability, and cross-cultural tourism studies examining how international tourists from different cultural backgrounds experience Buddhist cultural tourism.

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Conflict of interest: The authors declare no conflicts of interest.

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References

Chairattana-udomkul, S., & Theptha, W. (2010). *Physical development and value enhancement of tourist attractions that are the image of Chai Nat province*. Thailand Research Fund.

Chankaew, K. (2017). *Sustainable community tourism management: A case study: Koh Yo Community, Songkhla Province* [Master's thesis, Thammasat University]. Thammasat University Repository.

Hinsui, C., Thanakit, S., & Prommin, W. (2014). Buddhist tourism development strategies for sustainable cultural heritage preservation. *Journal of Tourism and Cultural Studies, 8*(2), 123–145.

Chuthaporn, H., Siriporn, T., & Wanchai, P. (2014). Guidelines for promoting Buddhist tourism in Somdet District, Roi Et Province. *International Journal of Thai Tourism Studies, 1*(1), 45–62.

Payutto, P. A. (2013). *Buddhism and Thai society: Historical perspectives and contemporary challenges* (7th ed.). Active Print.

Saisingh, S. (2019). *Dvaravati art, early religious culture in Thailand* (2nd ed.). Muang Boran Publishing.

Sangthong, M., Phrommin, S., & Kaewkanha, T. (2017). *Guidelines for connecting tourism between Phra Nakhon Si Ayutthaya, Ang Thong and Sing Buri provinces* (Research Report). Faculty of Science and Technology, Rajamangala University of Technology Suvarnabhumi.

Songrum, N. (2018). *Buddhist tourism management of Wat Phra Phutthabat, Wat Sala Daeng and Wat Phra Phutthachai* [Doctoral dissertation, Mahachulalongkornrajavidyalaya University]. MCU Digital Repository.

Tourism Authority of Thailand. (2001). *National ecotourism action plan*. Tourism Authority of Thailand Conservation Division.

Tourism Authority of Thailand. (2017). *Guidelines for sustainable religious tourism development*.