

The Results of Evolution, Wisdom, and Identity of Indigo-Dyed Fabric in Northeastern (Isan) Thailand

Kanchaya Jantarungsee¹, Burin Plengdeesakul² and Teerayut Pengchai³

Abstract

This qualitative research aims to study the evaluation, wisdom, and identity of indigo-dyed fabric in Northeastern (Isan) Thailand. The cultural inheritance concept, the beliefs associated with textile wisdom concept, the wisdom concept, the cultural diffusion theory, the evolution theory, the structural functionalism theory, and the identity theory were used as theoretical frameworks. Data were collected from documents and fieldwork using research instruments including surveys, and interviews. Descriptive analysis was used to analyse and present this data. The study revealed the extensive history of Isan indigo-dyed fabric, tracing its evolution from 1897 to 2022, which can be divided into four distinct periods: 1) Emergence of evidence in Isan (1897–1941); 2) Decline (1942–1969); 3) Revival (1970–2016); and 4) Transition into the creative economy (2017–2022). Wisdom surrounding indigo-dyed fabric was explored across four dimensions: 1) Production process, 2) Functions, 3) Patterns, and 4) Beliefs. The identity of Isan indigo-dyed fabric was classified into three main categories: 1) Individual identity, encompassing the production process and beliefs; 2) Collective identity, which includes colours, patterns, and usages or functions; and 3) Sociocultural identity, embodied by the discourse “World of Indigo” shaped by societal and cultural acceptance. These findings underscored the pivotal role of social changes in facilitating the inheritance and preservation of wisdom. Therefore, transforming indigo-dyed fabric into a product of economic significance with widespread acceptance, ultimately solidifying its status as a cultural heritage.

Keywords: Indigo-Dyed Fabric, Northeastern (Isan) Thailand, Evolution, Wisdom, Identity

INTRODUCTION

The wisdom of dyeing textiles with natural colours has deep roots in Thai culture, spanning from historical traditions to the modern era. Indigo dye, derived from the indigo plant, stands as one of the most popular natural dyes for clothing and various articles. Beyond its aesthetic appeal, indigo dyeing carries profound cultural significance, infused with beliefs, faith, and a way of life deeply embedded in local communities. It transcends ethnic and national boundaries, representing a shared cultural heritage across diverse communities and nations within the Mekong River Basin region.

Our exploration of ASEAN’s shared culture has unveiled a common thread among its diverse populations. It is recognized that ASEAN people share a common ancestry marked by historical migrations and movements across the region, which led to the formation of distinct linguistic and ethnic groups. For instance, the emergence of the Tai-Lao ethnic group can be traced back to ancestral migrations within the Mekong River Basin region (Sujit Wongthep, 2016). Despite cultural and ethnic diversity, Isan in Thailand and Laos share a cultural heritage deeply rooted in the wisdom of indigo dyeing. In both regions, terms such as “Nil” and “Mor Kram” are used to denote indigo dye, while “Mor Nil” signifies the indigo dyeing pot. Notably, Isan provinces in Thailand, including Sakon Nakhon, Nong Bua Lamphu, Udon Thani, Nong Khai, Nakhon Phanom, Mukdahan, and Ubon Ratchathani, and certain subdistricts in Laos, specifically Phongsali, Luang Prabang, Houaphanh, Sainyabuli, Vieng Chan, and Savannakhet, exhibit similar indigo dyeing practices. This convergence suggests a shared repository of knowledge and beliefs related to indigo dyeing within the region, deserving exploration, particularly in the terms of patterns, techniques, processes, and beliefs.

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Much like in Isan and Laos, the Tai-Lao ethnic group holds the belief that “Mor Kram” or “Mor Nil” possesses a life of its own, necessitating special care and nurturing. Neglect may cause it to “escape” or “hide,” indicating that the dyeing process might fail to achieve the desired colours. Furthermore, these beliefs extend to the patterns concealed within the fabric, which are believed to carry hidden meanings and significance. Therefore, the wisdom of indigo dyeing serves as a means of communication, conveying cultural and social messages. In essence, indigo-dyed fabric is not merely a material possession but a reflection of identity, relationships within society, and cultural expressions. Identity, in this context, alludes to the unique qualities and characteristics that distinguish individuals or objects, often carrying underlying meanings or significance (Apinya Feungfusakul, 2003). Identity has played a pivotal role in driving societal and cultural changes.

It is evident that Isan has a rich tapestry of shared culture, shaped by historical relationships, ways of life, beliefs, wisdom, and the migrations of diverse ethnic groups. These factors have been the driving forces behind the diffusion of culture and wisdom, ultimately giving rise to a unique identity, beautifully expressed through the traditional woven fabric known as indigo-dyed fabric. Indigo-dyed fabric holds a profound connection to the way of life of the Tai ethnic group in Isan, a connection that spans generations. The craftsmanship behind indigo-dyed fabric, encompassing both weaving and dyeing, embodies a harmonious blend of science and artistry that requires the skills and expertise passed down through ancestral wisdom.

Indigo-dyed fabric traditionally finds use in the daily life of the Isan people, deeply intertwined with their agricultural practices. It plays an integral role in local customs and ceremonies, serving as a prominent indicator of individual status and symbolizing harmonious relationships among community members. Both indigo dye and indigo-dyed fabric are held in high regard as remedies within the local communities. This observation is consistent with the study conducted by Umarin Tularak (2013), which underscored the deep connections between indigo-dyed fabric and the traditional womanhood ceremony and the locality of Isan. Moreover, the production process and patterns of indigo-dyed fabric are intricately woven into the ways of life and beliefs of the ethnic groups that share a common cultural root in indigo dyeing. Indigo-dyed fabric serves as a reflection of both the skills and identity of its owner. The use of indigo-dyed fabric and the practice of indigo dyeing remain closely tied to the wisdom cherished by the Isan people across generations. Regardless of the passage of time, indigo-dyed fabric continues to play a vital role in reinforcing a sense of ethnic identity, conveying shared cultural relationships, and reflecting social changes. The processes of cultural production of indigo-dyed textiles and their distribution and consumption, examining how commodities “mediate” people and their practices and relations in different places and contexts. The dynamics of cultural production as presented in the life cycle of a product form part of a brand’s social life that accretes to comprise its “cultural-economic biography.” To emphasize the process of transforming into indigo dyed textile products. This observation is consistent with the study conducted by Chanjittra Chanorn (2019), Today, Isan indigo-dyed fabric has evolved into a prominent export commodity, driven by the global trend of promoting Eastern wisdom in the era of globalization.

Accordingly, indigo-dyed fabric is a reflection of civilization and embodies the harmonious fusion of functionality and aesthetics, blending both science and art. It serves as a vessel for the inheritance of cultural practices handed down through generations, bearing witness to the wisdom of creativity and cultural transmission across Isan’s history. The study of indigo-dyed fabric and local textiles, which encapsulate the wisdom and culture of Isan, opens a promising avenue for fostering cultural awareness, cultivating an appreciation for local wisdom, and ensuring the preservation of indigo dyeing culture into the future. In recent times, indigo-dyed fabric has undergone a remarkable transformation, shifting from being a symbol of modesty associated with rural farmers to becoming a highly sought-after commodity with significant market value. Using natural dyes and historical processes to create contemporary textiles that encompass art and design. The Blue Thread: Connecting Community through Indigo in the US and Japan That used indigo to build community. IndiGrowing Blue communally engaged interested individuals in the labor of growing and processing indigo in order to foster community. It uses natural dyes and historical processes to create contemporary textiles that encompass both art and design. This observation is consistent with the study conducted by Rowland Ricketts (2016), This

transformation can be attributed to innovative approaches in revitalizing indigo-dyed fabric and the addition of value through storytelling, making it a preferred choice among environmentally conscious consumers who place value on natural and sustainable products. Notably, indigo-dyed fabric has not only gained popularity among Thai consumers but has also captured the attention of international tourists, particularly those from countries like Japan, the United States, and the United Kingdom.

This study focused on provinces in the Isan region that still uphold traditional wisdom in the production of indigo-dyed fabric. The selection criteria for these provinces included: 1) The presence of a comprehensive indigo-dyed fabric production process, from upstream to downstream; 2) The presence of wisdom, traditional practices, and ethnic groups engaged in the art of indigo dyeing; and 3) Areas with the highest distribution of indigo-dyed fabric. The selected provinces—Sakon Nakhon, Nakhon Phanom, Udon Thani, Mukdahan, Kalasin, and Ubon Ratchathani—represent strongholds of indigo dyeing wisdom within the Isan region. This wisdom has been preserved and passed down through generations across various ethnic groups, ultimately evolving into a shared art and cultural heritage throughout the Isan region. This shared art and culture play a significant role in shaping the evolution and identity of indigo-dyed fabric, providing a wellspring of inspiration for creative designs and products. This aligns with the study conducted by Jaipak Burapajata (2016), which examined the identity and patterns of “Teen Jok Mae Chaem” woven fabric to facilitate the design and development of culturally enriched textiles. It highlights the importance of integrating cultural heritage and wisdom to generate added value and preserve local arts and culture by unveiling identity. As Choenkwan Putchong (2006) suggested, identity serves as a means of communication, conveyed through both verbal and non-verbal languages. While identity may evolve over time, it remains the most distinct expression of oneself. Consequently, it becomes imperative to explore the wisdom and identity associated with Isan indigo-dyed fabric.

Based on the aforementioned reasons, this study on the results of evolution, wisdom and identity of Isan indigo-dyed fabric was conducted with the aim of examining the evolution, wisdom, and identity associated with Isan indigo-dyed fabric. This exploration drew insights from various theoretical frameworks, including those related to the cultural inheritance concept, the beliefs associated with textile wisdom concept, the wisdom concept, the cultural diffusion theory, the evolution theory, the structural functionalism theory, and the identity theory. The goal of this study is to advocate for the preservation of local wisdom, ensuring its continuity and enabling future generations to witness its evolution within the broader context of economics, society, and culture. This endeavour seeks to instill pride in local cultural heritage and actively promote the transmission of this wisdom into the future.

METHODS

This qualitative research focused on exploring the wisdom and identity associated with indigo-dyed fabric in the Isan region, specifically Sakon Nakhon, Nakhon Phanom, Udon Thani, Mukdahan, Kalasin, and Ubon Ratchathani. The study involved an in-depth examination of the historical background and evolution of Isan indigo-dyed fabric, particularly concerning the processes and beliefs rooted in wisdom, as well as the identity related to the production process, techniques, functions, and patterns of Isan indigo-dyed fabric. Data were collected from two target groups: 1) Experts, comprising academic experts, community philosophers, and leaders with expertise in specific domains, covering the evolution, historical background, wisdom, and identity of Isan indigo-dyed fabric, as well as experts with knowledge regarding the beliefs underpinning indigo dyeing; and 2) Practitioners, consisting of group or community leaders, dyers, weavers, or manufacturers involved in the dyeing, weaving, and design processes of Isan indigo-dyed fabric. Two types of data were collected: secondary data and primary or field data. The collected data were analyzed in line with the research objectives to extract valuable insights, which were subsequently organized and categorized. The triangulation technique was employed to validate data, taking into consideration variations across individuals, time, and locations. Data obtained from literature, observations, and interviews were thoroughly assessed for discrepancies and consistencies, compared against relevant theoretical frameworks, and ultimately presented using a descriptive approach.

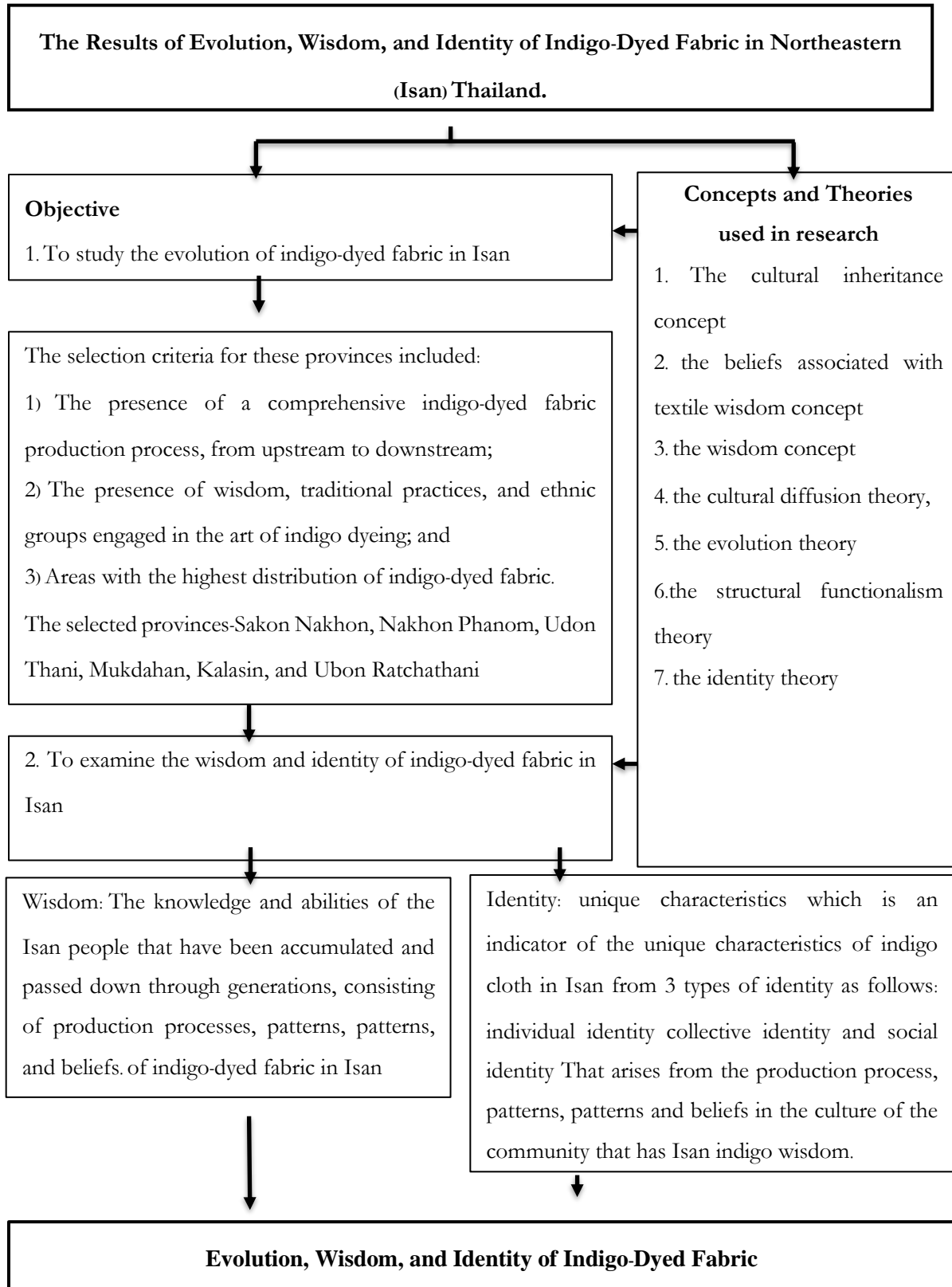


Figure 1. Conceptual framework and research theory.

RESULTS

The obtained data were analyzed in line with the research objectives: 1) To study the evolution of Isan indigo-dyed fabric; and 2) To study the wisdom and identity of Isan indigo-dyed fabric. The research area includes: 1) Sakon Nakhon Province; 2) Kalasin Province; 3) Nakhon Phanom Province; 4) Udon Thani Province; 5) Mukdahan Province; and 6) Ubon Ratchathani Province. The findings are summarized as follows:

Evolution of Isan Indigo-Dyed Fabric

The evolution of Isan indigo-dyed fabric was examined with a primary focus on two main aspects:

Historical Backgrounds of Isan Indigo-Dyed Fabric

According to the data were collected from documents and fieldwork using research instruments including surveys, and interviews, the cultural practice of plant-based dyeing to produce indigo-colours textiles has a rich history spanning over 1,000 years. This practice has earned recognition as the “King of Dyes”. The origins of textile dyeing can be traced back to the Neolithic period, approximately 6,000 years ago, with the earliest evidence found in China and associated with the upper class. There is also clear evidence of regions with a culture of dyeing and textile production that has been passed down through generations to the present day. In the Isan region, historical records date back to the era of King Fa Ngum, which was around the 18th century (1896-1916). Information about the Tai ethnic group, who possessed knowledge of textile weaving since ancient times, was documented in the Chronicle of Lan Xang. The influence of this knowledge during the Lan Xang Kingdom era extended to the Isan region. References to textile dyeing knowledge can also be found in the early Rattanakosin era (1782-1851), as evident in the “Pathom Ko Ka” primer of Phra Thep Moli and Phra Ammaraphirakkhit. Additionally, the traditional poem of the Isan people makes reference to the term “Mor Nil,” further emphasizing the longstanding practice of textile dyeing in the region.

Changes in Customs and Eras

According to the data were collected from documents and fieldwork using research instruments including surveys, and interviews, it is evident that the six provinces in the Isan region have undergone multiple cultural and historical transitions, which can be divided into four distinct periods:

Emergence of evidence in Isan (1897-1941): The evidence emerges from records of the Rattanakosin era, specifically from 1897, which was the 30th year of King Chulalongkorn’s (Rama V) reign. During this period, centralization reforms led to surveys and documentation of the establishment of communities. The Chronicle of Isan Provincial Capital, composed by Her Excellency Wichit (M.R. Pathom Khanachon) in 1900, serves as another source of historical insight. This era witnessed significant transformations, including the consolidation of five provincial capitals and the change of the region’s name from “Esan” to “Isan.” Indigo-dyed fabric was prevalent in all communities across the Isan region. Indigo dyes were widely used in cotton and silk textiles, with distinctive dyeing techniques such as ikat dyeing and layered indigo dyeing to produce a spectrum of colours. This period marks the beginning of documenting local wisdom within various communities. The evidence of indigo-dyed fabric in the Isan region can be chronologically summarized as follows: In 1902, indigo-dyed fabric was discovered in Ban Khemmarat, Ubon Ratchathani Province. In 1903, it was found in Ban Nong Sang, Nakhon Phanom Province. In 1905, it was evident in Ban Don Koi, Sakon Nakhon Province. In 1907, it was discovered in Ban Nong Sung, Mukdahan Province. Finally, in 1926, it was detected in Ban Akat, Sakon Nakhon Province. During this period, changes in the materials used for indigo-dyed fabric weaving were observed. In 1935, the first Siamese cotton factory was established, leading to a shift in the production of cotton yarns. Instead of hand-spinning cotton fibers, communities began purchasing cotton yarns from the factory for indigo dyeing, which saved time in the dyeing and weaving process. The beliefs surrounding Isan indigo-dyed fabric during this period were rooted in the diverse ethnic groups, each with its unique beliefs and customs. These encompassed customary practices and prohibitions in the indigo-dyed fabric-making process, from pot preparation and vatting

to dyeing and weaving. Different ethnic groups and regions held distinct beliefs that were passed down through generations, contributing to the preservation of these varied traditional practices.

Decline (1942–1969): The decline of indigo-dyed fabric in the Isan region was influenced by political changes and the impact of colonization, notably during World War II. This global conflict began in September 1939, during the reign of King Rama VIII, with Luang Phibunsongkhram (Field Marshal P. Phibunsongkhram) serving as the prime minister. It was during this period that Japan declared war on the Allied Powers, aiming to use Thailand as a transit point to access Myanmar and take over India. Japanese forces entered southern Thailand without prior warning, and Thailand, faced with limited military capabilities, had no choice but to concede and allow Japanese troops to pass through the country. The Thai government hoped that by cooperating, Thailand could avoid falling under Japanese influence in terms of economics and politics. As World War II began to subside, Field Marshal P. Phibunsongkhram established the Ministry of Industry and state-owned weaving factories in 1942. Influenced by external factors and pressures, Thailand began to embrace Western liberal capitalism and adopted the concept of economic nationalism. These policies resulted in a decline in the traditional craft of indigo-dyed fabric within local communities. The emergence of chemical dyes gradually supplanted natural dyes, causing indigo-dyed fabric to become primarily associated with low-income households or farmers. After the end of World War II in 1945, Thailand underwent significant changes in governance. Following the passing of King Ananda Mahidol on June 9, 1946, King Bhumibol Adulyadej ascended to the throne but later returned to Switzerland. During this period from 1965 to 1980, the Isan region was under the influence of a communist party, leading to a decline in the importance of indigo-dyed fabric, as evidenced by the lack of documented evidence during this period. Despite this diminishing significance, the production of indigo-dyed fabric remained prevalent in rural communities, primarily for domestic use, from 1942 to 1969. During 1970–1976, the establishment of the Support Foundation marked a significant turning point in the revival of indigo-dyed fabric in the Isan region. This initiative was led by Her Majesty Queen Sirikit, who recognized the importance of preserving local woven fabrics. During the decline period, the beliefs surrounding Isan indigo-dyed fabric began to wane as people focused more on securing their livelihoods during the war and regional uprisings. The transition into the industrial era brought a shift in labor dynamics, with traditional fabric weavers moving into factory jobs. Consequently, mass-produced fabrics from these factories became more prevalent due to their affordability and the introduction of chemical dyes that significantly sped up the dyeing process.

Revival (1970–2016): The revitalization of indigo-dyed fabric in the Isan region was driven by shifts in governance and the impact of colonization, resulting in an influx of refugees from neighboring countries seeking safety in Thailand. The rise of communism in Thailand, along with the entry of communist forces into Isan between 1965 and 1983, led to internal conflicts within the region. When King Bhumibol Adulyadej returned to Thailand, his role evolved into that of a constitutional monarch in response to shifts in governance. He continued to carry out his royal duties by actively promoting various aspects of national development, especially in the economic sector. One of his notable royal initiatives was the Mulberry and Silkworm Cultivation Project, which later resulted in the establishment of the Support Foundation of Her Majesty Queen Sirikit. During 1970–1976, his royal initiatives primarily focused on reviving local woven fabrics, with the aim of providing additional sources of income for the population while emphasizing the conservation and revitalization of these arts to ensure their sustainable preservation. Following the end of the communist insurgency in Isan, efforts were made to revive local woven fabrics. Local woven fabric competitions were organized under royal patronage from 1991 to 2001. In line with this initiative, government budgets were allocated for research and development by the NSTDA from 1997 to 2011. To promote knowledge exchange and skill development, indigo dyeing training programs were organized in Sakon Nakhon, attended by experts and practitioners from Sakon Nakhon, Nakhon Phanom, and Surin provinces. Sakon Nakhon, known for its significant cultivation of indigo plants and prevalent practices of indigo dyeing, was selected as the first province to receive support. The knowledge and skills developed in Sakon Nakhon were then shared and extended to other subdistricts, including Ban Kut Haet and Ban Nong Phue. In 2000, the Department of Industrial Promotion organized the “World of Indigo” seminar in Chiang Mai. Subsequently, in 2006, the Department of Intellectual Property, under the Ministry of Commerce, officially registered “Sakon Nakhon Natural Indigo-dyed Fabric” as a geographical indication. This recognition sparked a

renewed interest in natural indigo-dyed fabric, leading to the revival of local wisdom and customary practices. As a result, the local economy was stimulated, enabling the export and international recognition of Isan indigo-dyed fabric products, thereby generating income for the region. During the revival period (1970-2016), the beliefs surrounding Isan indigo-dyed fabric varied across the six provinces. However, the inheritance of these beliefs began to diminish in all six provinces due to the emergence of scientific and technological advancements in Thailand. These beliefs were put to test and compared with scientific facts, which contributed to their decline. Simultaneously, technological advancements brought changes to the production process, reducing production time and replacing traditional natural materials with chemical or synthetic alternatives.

Transition into creative economy (2017-2022): The indigo-dyed fabric industry in the Isan region experienced substantial growth, as more communities became involved in the dyeing and weaving process. Isan indigo-dyed fabric gained international recognition and attracted a growing number of tourists who visited the region to explore the traditional art of indigo dyeing. Notably, the environmentally friendly nature of indigo positioned it as an industrial crop, contributing to increased exports and income generation for the country. In line with the 12th National Economic and Social Development Plan for 2017-2021 and the philosophy of “Sufficiency Economy,” the government has instituted policies to foster creative and cultural economy. These policies are grounded in the framework of the 20-Year National Strategy (2018-2037), which serves as the master plan for national development and the achievement of sustainable development goals. Consequently, various public and private organizations have displayed a growing interest and a deepening recognition of the significance of indigo-dyed fabric. In 2018, the Ministry of Natural Resources and Environment organized the offsite BEDO (Northeastern Region) event in Sakon Nakhon, a province known for its community engagement, distinctive cultural heritage, and robust integrated work practices. The event was held under the theme “Isan Heritage: Resource Capital and Local Wisdom for Bioeconomic Development,” in conjunction with the Isan heritage exhibition titled “The Miracle of Indigo-dyed Fabric.” Furthermore, in 2018, the OTOP Inno-Life Tourism Community project was initiated by the Community Development Department, Ministry of Interior. The Department of Foreign Trade, Ministry of Commerce, notified the World Crafts Council to evaluate the qualifications of indigo-dyed fabric production in Sakon Nakhon and local communities. The Council verified that the criteria were met, including the use of natural materials with no chemical presence. As a result, Sakon Nakhon was officially certified as the “World Craft City for Natural Indigo,” making it the first province in Thailand and one of the few in the Asia-Pacific region to receive this certification. In response to the establishment of ASEAN free trade, a budget was approved to develop and enhance the capabilities of Isan craftsmanship cooperatives. These triggered discussions surrounding Isan indigo-dyed fabric in Sakon Nakhon as the “World Craft City for Natural Indigo,” reigniting the sharing of knowledge and expertise in the production of indigo-dyed fabric across the Isan region. In 2021, the Ministry of Interior embraced the guiding principles of Her Royal Highness Princess Sirivannavari Nariratana Rajakanya, in a concerted effort to carry forward the royal initiative of Her Majesty Queen Sirikit, the Queen Mother, which emphasizes the revival and conservation of Thai textile wisdom. This initiative was designated as the primary mission of the Ministry of Interior for the year 2022, aimed at promoting and supporting the use of Thai textiles under the “Wearing Thai Textiles with Joy” project. The core objective of this project was to conserve the cultural heritage that reflects the societal and cultural context of each region, while promoting grassroots economic development to provide jobs and income to citizens, elevating their quality of life and fostering sustainable self-reliance. As a result of these initiatives, Isan indigo-dyed fabric has enjoyed a renaissance and assumed a pivotal role in the fashion industry, generating income for the Isan region and securing its sustainability for future generations. During this period of transition into the creative economy (2017-2022), the beliefs surrounding Isan indigo-dyed fabric were predominantly influenced by political changes and the amendment to the 12th National Economic and Social Development Plan, which aimed to promote the development of the creative and cultural economy. Consequently, traditional practices and prohibitions regarding the production of indigo-dyed fabric were once again observed in certain regions. The resurgence of these beliefs was driven by government initiatives focused on preserving cultural heritage and promoting tourism and creative economy. These efforts led to the emergence of a diverse array of woven fabrics

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across the Isan region, each characterized by distinct designs and patterns, as each region sought to establish a unique identity and selling point for its indigo-dyed fabric.

Diagram showing the evolution changes in customs and eras of Isan indigo-dyed fabric from 1897 – 1922.

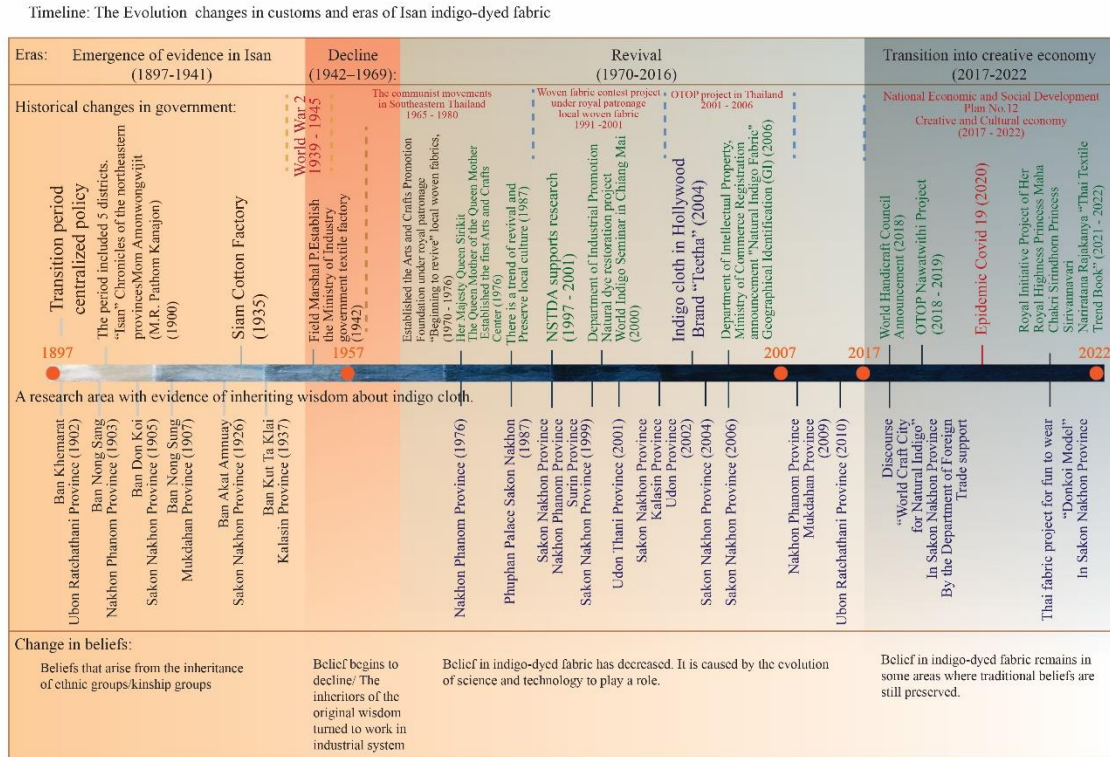


Figure 2. The Evolution changes in customs and eras of Isan indigo-dyed fabric.

The evolution of Isan indigo-dyed fabric patterns was thoroughly examined through fieldwork and data collection from relevant documents and books. This study also drew upon Herbert Spencer’s theory of evolution, which aligns with the development of Isan indigo-dyed fabric patterns. According to this theory, evolution stems from a common source and converges through a process of synthesis, resulting in significant advancements. The theory also proposes that social development follows the laws of nature, implying that individuals who can adeptly adapt to new environmental conditions will survive and thrive, thereby contributing to overall development. The evolution of Isan indigo-dyed fabric patterns can be divided into the following periods:

Emergence of evidence in Isan: During this period, traditional weaving techniques practiced in households were passed down through generations. It was also the period when local wisdom surrounding textile weaving emerged, encompassing techniques such as weft ikat weaving, continuous supplementary weft weaving, locally referred to as “Khit,” and Khit-ikat weaving. The production of indigo-dyed fabrics during this period relied on handspun and handwoven cotton yarns, as well as natural materials.

Decline: This period coincided with World War II and significant political events in the Isan region, specifically the Communist Insurgency. While traditional weaving patterns persisted, there was a decline in weaving activities due to the increasing prevalence of chemical-dyed and factory-woven fabrics.

Revival: This period witnessed substantial changes in the production of Isan indigo-dyed fabric, driven by government initiatives and advancements in science and technology. Traditional techniques were combined with modern ones, leading to the emergence of weft ikat and supplementary warp techniques. The production process began to incorporate a blend of chemically dyed and naturally dyed yarns to reduce costs and introduce innovative

designs. Moreover, semi-synthetic fibers like rayon gained popularity and began to replace handspun cotton yarns.

Transition into creative economy: The implementation of economic development plans drove artisans and artists to produce innovative works showcasing their unique identities. During this period, various new techniques emerged, including indigo gradient dyeing with up to 72 different shades, the application of the weft ikat technique to indigo-dyed fabric, tie-dyeing, embroidery, batik, screen printing, etching, painting, and, most recently, eco printing. Nevertheless, traditional weaving techniques remained in use. Local looms were still employed for weaving, and traditional methods such as two-shaft, three-shaft, four-shaft, and five-shaft weaving, supplementary warp, discontinuous supplementary weft, and brocade weaving were still practiced. Each region adopted different techniques based on their skills and expertise, aiming to create unique identities that reflect the culture of their respective provinces.

Diagram showing the evolution of Isan indigo-dyed fabric patterns from 1897 – 2022

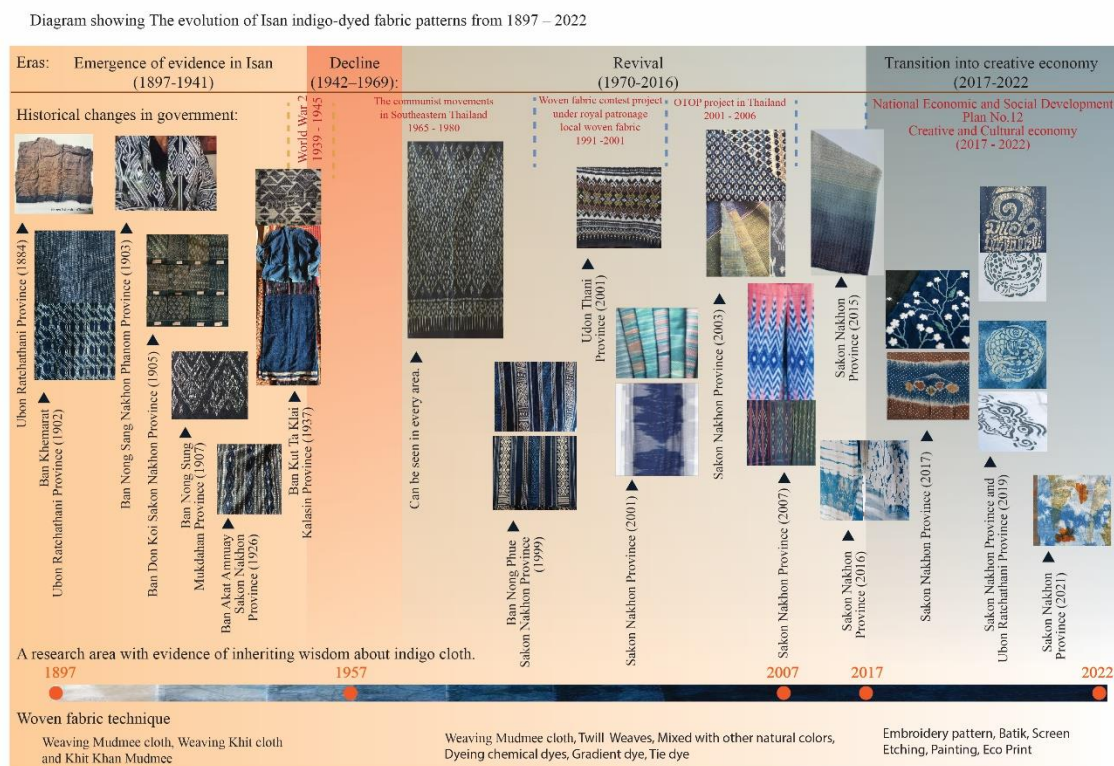


Figure 3. The evolution of Isan indigo-dyed fabric patterns.

Wisdom and Identity of Isan Indigo-Dyed Fabric

This study separately explored the wisdom and identity of Isan indigo-dyed fabric. The examination of wisdom related to Isan indigo-dyed fabric was categorized into four main aspects: 1) Production process; 2) Functions; 3) Patterns; and 4) Traditional beliefs associated with indigo-dyed fabric. The investigation into the identity of Isan indigo-dyed fabric was divided into three aspects: 1) Individual identity; 2) Collective identity; and 3) Sociocultural identity of local communities that embodied the wisdom of indigo-dyed fabric.

Wisdom of Isan Indigo-Dyed Fabric

The wisdom of Isan indigo-dyed fabric is an intellectual heritage that has been preserved and passed down through generations to the present day. This study examined the wisdom of Isan indigo-dyed fabric using the

framework proposed by Thawan Matcharat (2000), which classified wisdom into two main categories: tangible wisdom and intangible wisdom. The study encompassed wisdom pertaining to the production process, functions, patterns, and beliefs associated with indigo-dyed fabric across six research areas, and the findings are summarized as follows:

Production process: The species of indigo plants play a vital role in the wisdom regarding the production process. The most prevalent indigo species in the Isan region is *Indigofera tinctoria* (true indigo), renowned for its production of a purple-blue colours. The production process can be divided into four distinct stages, as follows:

Pot preparation: Each region adopted unique processes, formulas, and ingredients that were deeply rooted in local wisdom transmitted across generations within various ethnic groups and family lineages. The raw materials used in this stage were locally sourced and customized to the specific area. Some provinces, such as Sakon Nakhon, undertook a meticulous preparation process, from the selection of raw materials like alkali water-one of the key ingredients-to the inclusion of certain types of leaves and bark in the mixture.

Vatting: This stage requires careful observation and the expertise of the craftsman to ensure the production of vibrant and saturated colours. The process involves balancing the mixture with appropriate proportions of acidic, alkaline, and sugar solutions. In Sakon Nakhon and Nakhon Phanom, energy drinks were added to the mixture in place of alcohol. To create a vat of dye, the mixture must be continuously stirred and beaten to expose it to oxygen, triggering a series of chemical reactions that are influenced by the pH, air, and temperature.

Dyeing: While cotton or natural fibers were the conventional choices for indigo dyeing, contemporary practices have embraced semi-synthetic fibers such as rayon. During the dyeing process, it is important to observe the bubbles, colours, uniformity, and intensity of the vat. To achieve gradient colours, multiple dyeing sessions may be necessary to create chemical reactions between the vat, fibers, and air.

Weaving: The most prevalent weaving practices in the Isan region are two-shaft and four-shaft weaving. The wisdom associated with these weaving techniques is handed down from generation to generation within each ethnic group, resulting in distinct skills and expertise in various areas. However, certain regions may employ different weaving techniques, such as continuous supplementary weft and supplementary warp techniques.

Functions: According to the framework proposed by Sitthichai Smanchat (2019), the functions of Isan indigo-dyed fabric can be classified into three main categories. The first category encompasses clothing, featuring items such as headscarves, Pha Sabai or Pha Biang (shawl-like garment), sashes, and sarongs. The second category consists of multi-purpose fabrics, which include shawls, coffin covers, and textiles used for home decorations and room partitions, especially in daughters' bedrooms among the Tai ethnic group. It is worth noting that these fabrics are not commonly used for lower-body garments. Lastly, the third category includes fabrics used in various articles and occasions, consisting of tied-dyed fabric and rolled fabric. Tied-dyed fabric is typically 30 cm wide and is commonly used to make scripture wraps, pillows, and Tung flags (holy flags) for religious ceremonies. Rolled fabric refers to a roll, sheet, or meter of fabric that measures one meter in width after weaving and is suitable for crafting a range of products such as shirts, dresses, and trousers. In addition to these usages, Isan indigo-dyed fabric is employed for various purposes in the upper Isan region, including blankets and shoulder wraps. The inheritance of weaving wisdom within each ethnic group has led to specialization in the use of weaving tools known as reeds, which ensure that the width of the fabric aligns with the intended use.

Patterns: Using the framework of Wattana Chudhavipata (2012), patterns in Isan indigo-dyed fabric can be categorized into four types: 1) Animal-inspired patterns such as Naga and snake motifs; 2) Floral-inspired patterns such as elephant apple, flame lily, noni, and love grass; 3) Object-inspired patterns, featuring elements like combs, hooks, and spathes; and 4) Nature-inspired patterns, including stars, bael fruit, sand, water flow, and water chestnuts. The patterns in Isan indigo-dyed fabric are structured around two components: primary patterns, encompassing animal and floral-inspired motifs, and supplementary patterns, which include object and nature-inspired motifs. The wisdom regarding patterns in Isan indigo-dyed fabric has been passed down within

ethnic groups, shaped by the unique experiences, creativity, and skills of weavers, resulting in region-specific patterns. As a result of cultural diffusion, these patterns have transformed and evolved to reflect the changing cultural landscape and the era in which they exist. The results of this study revealed that, across all six provinces, the wisdom regarding Isan indigo-dyed fabric patterns was closely associated with the Naga, reflecting shared beliefs among different ethnic groups. The Naga was revered as a symbol of divinity, grandeur, blessings, happiness, prosperity, and even as a bridge connecting the earthly and divine realms. This shared cultural belief has been passed down from generation to generation, leading to the prevalence of Naga pattern in Isan indigo-dyed fabric. The “Punmaha” pattern, inspired by the flame lily, emerged as the second most common pattern in indigo-dyed fabric across the Isan region. Given the variation in its components across provinces, different terms were used to describe this pattern, such as “Punmahapua” and “Naga Oum Punmaha.” Furthermore, the “Dok Saan” or “Mhak Saan” pattern, inspired by the elephant apple, was also frequently observed in Isan indigo-dyed fabric.

Beliefs: The wisdom related to beliefs about Isan indigo-dyed fabric includes a common belief that the fabric patterns convey stories and provide historical context. Furthermore, there is a traditional belief concerning the production process. Local communities hold the belief that the indigo dyeing pot has a life of its own, which is indeed accurate, given the fermentation process that leads to the development of bacteria. These bacteria are the only microorganisms living in the dyeing pot and contribute to a series of chemical reactions resulting in various colours. Achieving the desired colours depends on factors such as temperature and ingredient proportions. Poor colours absorption due to these factors is often referred to as “the dyeing pot has escaped.” To prevent this, the dyeing pot is nurtured with ingredients such as sugar, sugar cane, banana, noni, white liquor, carambola, and tamarind. Oxygen is also added through the beating process to optimize colours absorption. In addition to these beliefs, there is a belief in the therapeutic and protective properties of indigo-dyed fabric. It is believed that indigo-dyed fabric can promote good health, offer sun protection, and aid in healing wounds and bruises. Moreover, lying by the fire—a practice known as “Yoo Fai”—on indigo-dyed fabric-covered bedding is believed to have health benefits. New mothers who have recently given birth are often recommended to engage in this practice. Additionally, indigo-dyed fabric is used to create herbal compress balls containing herbs or medicinal plants, which are then steamed and applied to swollen areas to treat conditions like mumps, pain, sores, and blisters. According to the framework proposed by Duan Kamdee (2000), wisdom surrounding the beliefs about Isan indigo-dyed fabric can be divided into two main parts. The first part concerns beliefs regarding the production process. In Sakon Nakhon, Nakhon Phanom, and Ubon Ratchathani, specific beliefs have been passed down through generations, guiding rituals and ceremonies at various stages of the production process. For instance, blessing ceremonies are performed to prevent undesirable colours outcomes by making offerings on holy days, and repentance ceremonies are conducted before preparing the dyeing pot. These beliefs also include certain restrictions, such as prohibiting menstruating women from being near the dyeing pot, refraining from indigo dyeing during periods of rainfall and thunder, and avoiding indigo dyeing and weaving during blessing ceremonies or funerals. The second part concerns beliefs about the functions of indigo-dyed fabric. In Kalasin and Sakon Nakhon, beliefs regarding the various uses of indigo-dyed fabric were observed. It is believed that swaddling newborns with indigo-dyed fabric after childbirth prevents rashes and itching. Tying a thread of indigo-dyed fabric around the child’s wrists or ankles after the Yoo Fai practice was believed to ward off fear or negative influences. Wearing indigo-dyed fabric during the Yoo Fai practice is believed to facilitate the excretion of amniotic fluid and aid in healing the uterus. Additionally, indigo-dyed fabric is used to create herbal compress balls, which are believed to treat wounds and bruises. Indigo-dyed fabric is also utilized in blessing ceremonies, weddings, and funerals. In summary, the wisdom of Isan indigo-dyed fabric embodies three types of relationships, according to the framework of Iam Thongdee (1999): 1) Intimate connections between humans and the environment, including animals, plants, and nature; 2) Social interactions within the community; and 3) Spiritual connections with supernatural beings. Additionally, the framework of Thawan Matcharat (2000) was employed to classify this wisdom into two main types: tangible wisdom, consisting of wisdom surrounding the production process, functions, and patterns of indigo-dyed fabric, and intangible wisdom, which encompasses

wisdom related to beliefs about indigo-dyed fabric. These insights into wisdom were crucial in the analysis of the identity of Isan indigo-dyed fabric.

Identity of Isan Indigo-Dyed Fabric

The identity of Isan indigo-dyed fabric must possess distinctive characteristics, serving as indicators of the unique attributes that have been passed down, through wisdom, as knowledge and traditions to the present day. This study examined the identity of Isan indigo-dyed fabric according to the concept of identity proposed by Choenkwan Putchong (2006), which categorized the identity into three types: 1) Individual identity; 2) Collective identity; and 3) Sociocultural identity of local communities that embodied the wisdom of indigo-dyed fabric. These types of identity were examined in three aspects across six research areas, as follows:

Individual identity in the aspect of the production process: Variations were observed in the techniques used for indigo extraction, dyeing mixture preparation, vating, and dyeing across different ethnic groups. These variations were influenced by the specific species of indigo plants used, which depended on the unique geographical conditions of each province. True indigo, known for its production of a purple-blue colours, was a common choice for indigo dye production in provinces such as Sakon Nakhon, Udon Thani, Nakhon Phanom, Kalasin, and Mukdahan. In contrast, wild indigo, which yields a navy-blue colours, was used exclusively in Sakon Nakhon and Ubon Ratchathani due to their low-lying terrain, ideal for wild indigo cultivation. Wild indigo is known to be more water-resistant and produces higher dyestuff yield. In all six provinces, local communities referred to the indigo colours as “onyx” colours.

Collective identity in the aspect of patterns: This study revealed the distinctive weaving patterns of indigo-dyed fabric in each area, each carrying a unique identity that mirrors the history and culture of each community. This identity is shaped by the local wisdom passed down through generations within families and communities. The accumulation of experience and expertise of weavers, along with the exchange of knowledge through migration, has contributed to the development of collective identity. It is characterized by specific elements, including colours, patterns crafted using similar techniques, weaving methods, and the fibers or materials employed. According to this study, the collective identity of Isan indigo-dyed fabric is exemplified by patterns that share common terminology, categorized into four groups: 1) Animal-inspired patterns; 2) Floral-inspired patterns; 3) Object-inspired patterns; and 4) Nature-inspired patterns. The composition of these patterns encompasses primary patterns like Naga, Punmaha (flame lily), and Dok Saan or Mhak Saan (elephant apple), as well as supplementary patterns such as water flow and water chestnut patterns. These patterns serve as vessels of cultural wisdom and storytelling, uniting communities with shared narratives and enriching the collective culture across the Asian region.

Sociocultural identity of communities of local communities that embodied the wisdom of indigo-dyed fabric: Society plays a significant role in shaping culture, with social discourses and shared values within communities contributing to the formation of identity. A compelling example of this can be seen in Sakon Nakhon, which has been designated as the “World of Indigo” by the public sector, society, and local communities. This designation was granted following an evaluation by the World Crafts Council, which assessed the qualifications of indigo-dyed fabric production in Sakon Nakhon and the surrounding communities. The Council verified that the criteria, including the use of natural materials without any chemical additives, were met. Consequently, in 2018, Sakon Nakhon was officially certified as the “World Craft City for Natural Indigo,” becoming the first province in Thailand and one of the few in the Asia-Pacific region to attain this certification. Continuous support from both the public and private sectors has revitalized indigo-dyed fabric, contributing to the economic growth of the Isan region.

Table.

Table of data analysis results : Identity of Isan indigo-dyed fabric							
Identity of Isan indigo-dyed fabric	Wisdom of Isan indigo-dyed fabric	Research area					
		Sakon Nakhon Province	Kalasin Province	Nakhon Phanom Province	Udon Than Province	Mukdahan Province	Ubon Ratchathani Province
Individual identity	Production process	✓	✓	✓	✓	✓	✓
	Functions	✗	✗	✗	✗	✗	✗
	Patterns	✗	✗	✗	✗	✗	✗
Collective identity	Traditional beliefs associated with indigo-dyed fabric	✓	✗	✓	✗	✗	✓
	Production process	✗	✗	✗	✗	✗	✗
	Functions	✓	✓	✓	✓	✓	✓
	Patterns	✓	✓	✓	✓	✓	✓
Sociocultural identity of communities	Traditional beliefs associated with indigo-dyed fabric	✗	✗	✗	✗	✗	✗
	Production process	✗	✗	✗	✗	✗	✗
	Functions	✓	✓	✓	✓	✓	✓
	Patterns	✓	✓	✓	✓	✓	✓
	Traditional beliefs associated with indigo-dyed fabric	✗	✗	✗	✗	✗	✗

Table.

Table summarizing the results of data analysis: uniqueness of Isan indigo-dyed fabric			
Identity	Analysis from theory	Summary of identities obtained from the study of wisdom	Identity of Isan indigo-dyed fabric
Individual identity	<ul style="list-style-type: none"> Individual characteristics from self-perception/self-identity 	<ul style="list-style-type: none"> Process wisdom: (Process/Formula/Ingredients) Wisdom of belief: <ol style="list-style-type: none"> Production process Usage/usage aspect (Function) 	<ul style="list-style-type: none"> specific process that are adapted to local lifestyle and materials Belief in rituals In the process of making indigo - Belief in using indigo cloth in specific areas where it is used from birth to death.
Collective identity	<ul style="list-style-type: none"> Group characteristics Systematic common symbols The process of creating collective consciousness 	<ul style="list-style-type: none"> Wisdom in patterns Wisdom in style (Usage format) 	Indigo colour (Nil Colour) and patterns from common identity. Main pattern: Naga Panmaha Secondary patterns: Kap pattern, Makaan pattern Makkhap pattern.
Sociocultural identity of communities	<ul style="list-style-type: none"> Group characteristics Systematic common symbols <p>The process of creating collective consciousness</p>	<p>Discourse "World Indigo"</p> <p>Economic plans and policies</p>	Inherited wisdom cause revival This causes the spread of indigo wisdom and causes social change It's the indigo cloth trend.

CONCLUSION

Evolution of Isan Indigo-Dyed Fabric

The evolution of Isan indigo-dyed fabric was examined across six provinces and can be divided into four distinct periods: 1) Emergence of evidence in Isan (1897-1941); 2) Decline (1942-1969); 3) Revival (1970-2016); and 4) Transition into creative economy (2017-2022). The findings of this study align with Franz Boas' theory of cultural diffusion, which posits that the exchange of cultural elements between different societies leads to the spread of culture. When cultures diffuse, more advanced societies may adopt aspects of the culture they come into contact with, blending them with their existing culture. The diffusion of cultural wisdom regarding Isan indigo-dyed fabric has systematically driven changes in indigo-dyed fabric. This corresponds with Talcott Parsons' theory of structural functionalism, which asserts that society is a complex system with specific roles and activities designed to meet its needs or prerequisites. This dynamic process induces changes within society and communities, including adaptations of cultural wisdom to correspond to the environment for achievement of societal goals. This adaptation is essential for ensuring integration and maintaining social cohesion. Moreover,

the theory highlights that society requires mechanisms for maintaining and preserving the motivational energy of system elements such as culture and values. These mechanisms encompass the transmission of wisdom within families, individual specialization, migration, and shifts in governance. All of these factors facilitate the exchange of wisdom and knowledge, ultimately resulting in the emergence of new knowledge and territorial settlements that contribute to the cultivation of high-quality indigo plants, the development of diverse indigo dye colours, and the promotion of sustainability.

The findings of this study also align with Herbert Spencer's theory of evolution, which states that evolution stems from a common source and converges through a process of synthesis. This progression leads to complex and advanced developments, notably the ability to adapt to new environmental conditions, thereby contributing to further improvements. In the context of this study, the evolution of Isan indigo-dyed fabric is evident through changes in the production process, from weft ikat, continuous supplementary weft, discontinuous supplementary weft, tie-dyeing, screen printing, etching, to eco painting. Furthermore, changes in the choice of materials used in weaving, from cotton fibers to semi-natural fibers like rayon, were observed. Prior to the emergence of sericulture, cotton cultivation was prevalent among the Isan people, and the traditional cotton spinning ceremony was a cherished practice passed down through generations. Cotton was therefore the primary material used in making indigo-dyed fabric. These shifts, in conjunction with the broader transitions related to industrialization, scientific and technological advancements, and the creative economy, have played a crucial role in the evolution of Isan indigo-dyed fabric.

Wisdom and Identity of Isan Indigo-Dyed Fabric

This study investigated local wisdom to identify the distinctive identity of Isan indigo-dyed fabric, as follows:

Wisdom of Isan Indigo-Dyed Fabric

Wisdom is a product of knowledge transmission from ancestors and hinges on the careful observation and learning of each step of the production process. Today, Isan indigo-dyed fabric has evolved into a valuable product that generates income and contributes to the local economy. In light of this, we are interested in exploring the wisdom and identity encapsulated in Isan indigo-dyed fabric, with the aim to create inspiration and concepts for the design of creative products. Drawing from the framework proposed by Thawan Matcharat (2000), Thai wisdom is characterized by its holistic nature and intrinsic cultural values. It is deeply ingrained in the Thai way of life, where local wisdom often serves as a wellspring of new knowledge, facilitating learning, problem solving, management, and adaptation in the daily lives of the Thai people. Based on this framework, wisdom can be divided into two main categories: tangible wisdom and intangible wisdom. Tangible wisdom encompasses an array of activities, including agriculture, handicrafts, arts, and music. Handicrafts comprise elements such as designs, patterns, techniques, methods, and materials used in crafting. On the other hand, intangible wisdom pertains to knowledge, beliefs, principles, or problem-solving approaches that have been passed down through generations, aiming to foster harmony in human life. In the context of Isan indigo-dyed fabric, tangible wisdom can be further divided into two facets: 1) Production process, specifically techniques and materials, which aligns with the study conducted by Suthiwong Phongphaibun (2006), who classified the production process into pot preparation, vating, dyeing, and weaving; and 2) Functions, which encompass the various applications of indigo-dyed fabric. This corresponds to the study conducted by Sitthichai Smanchat (2013), who categorized the functions of indigo-dyed fabric into three groups, namely clothing, multi-purpose fabrics, and fabrics used for various occasions. Intangible wisdom encompasses the beliefs surrounding indigo-dyed fabric. This aligns with the concept of cultural transmission proposed by Ratchapol Patchpiboon (1995), which states that wisdom is transmitted through both direct and indirect methods, often through various institutions. These beliefs also resonate with the concept of textile wisdom proposed by Pairat Anuphan (1993), which delves into the use of textiles in ceremonies and the cultural beliefs of the Isan people. Additionally, they are in line with the concept of wisdom proposed by Chuan Petkaew, focusing on the enrichment and enhancement of existing knowledge to make it relevant to the local community and society's context.

Identity of Isan Indigo-Dyed Fabric

The identity of Isan indigo-dyed fabric can be classified into three categories, namely individual identity, collective identity, and sociocultural identity. Individual identity is developed through self-reflection to portray a unique identity through Isan indigo-dyed fabric. Individual identity is evident in the production process, comprising techniques, formulas, and ingredients, and beliefs pertaining to both the production process and functions of indigo-dyed fabric. The wisdom related to the production process stemmed from the variations in the dye formulas and vating techniques employed in each province, resulting in a unique dye colours that represents their individual identity. With respect to the wisdom concerning beliefs about the pot preparation process, it was found that local communities in certain provinces, namely Sakon Nakhon, Kalasin, Nakhon Phanom, and Ubon Ratchathani, engage in traditional ceremonies and hold beliefs about the earth and heaven. Collective identity pertains to shared characteristics within a group, involving the use of common symbols in a systematic manner that leads to the formation of shared consciousness. The results of this study revealed that the patterns in indigo-dyed fabric were similar across the Isan region, specifically the Naga pattern, although there were variations in certain elements due to differences in the experiences, creativity, and heritage of each ethnic group. The Naga pattern and the “Punmaha” pattern emerged as the most prevalent primary patterns in Isan indigo-dyed fabric. Additionally, patterns such as water chestnut, spathe, and hook patterns, resembling the Naga pattern but with simplified details, were commonly used as supplementary patterns. Regarding the wisdom concerning functionality, the uses of Isan indigo-dyed fabric were closely associated with the way of life of the Isan people at every stage, from birth to death, thus shaping a collective identity in the Isan region. This collective identity was also evident in the dye colours, specifically the indigo colours, which significantly contributed to a unique regional identity. Sociocultural identity is a product of discourse that plays a pivotal role in fostering social acceptance and creating a culture, leading to the perception of Isan indigo-dyed fabric as an economic product that provides social values and benefits. The cultural traditions and customs of the Isan people have significantly contributed to the preservation of indigo dyeing practices. Moreover, the versatile applications of Isan indigo-dyed fabric in various occasions have played a crucial role in shaping sociocultural identity. Each province in the Isan region has distinctively developed its indigo-dyed fabric to establish a unique identity, thereby promoting product differentiation and boosting the local economy. This approach has led to widespread social and cultural acceptance. Furthermore, societal changes have facilitated the transmission of wisdom, resulting in the transformation of Isan indigo-dyed fabric into an economic product that enjoys broad acceptance and is celebrated as a cultural heritage. These findings align with Sheldon Stryker’s identity theory, which posits that identity is constructed on the foundation of the evolving society and culture and is rooted in the concept of structural functionalism, where each individual is assigned a status and role by society. These roles are formed and maintained through interactions with others, and these interactions, in turn, shape the salience and validation of specific identities. An individual’s interactions with others and their social context are thus instrumental in the formation of identity. Additionally, the findings of this study correspond with the identity framework proposed by Choenkwan Putchong, which categorizes identity into five distinct categories: 1) Individual identity; 2) Collective identity; 3) Corporate identity; 4) Social identity; and 5) Cultural identity, which can change according to the social and cultural context.

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