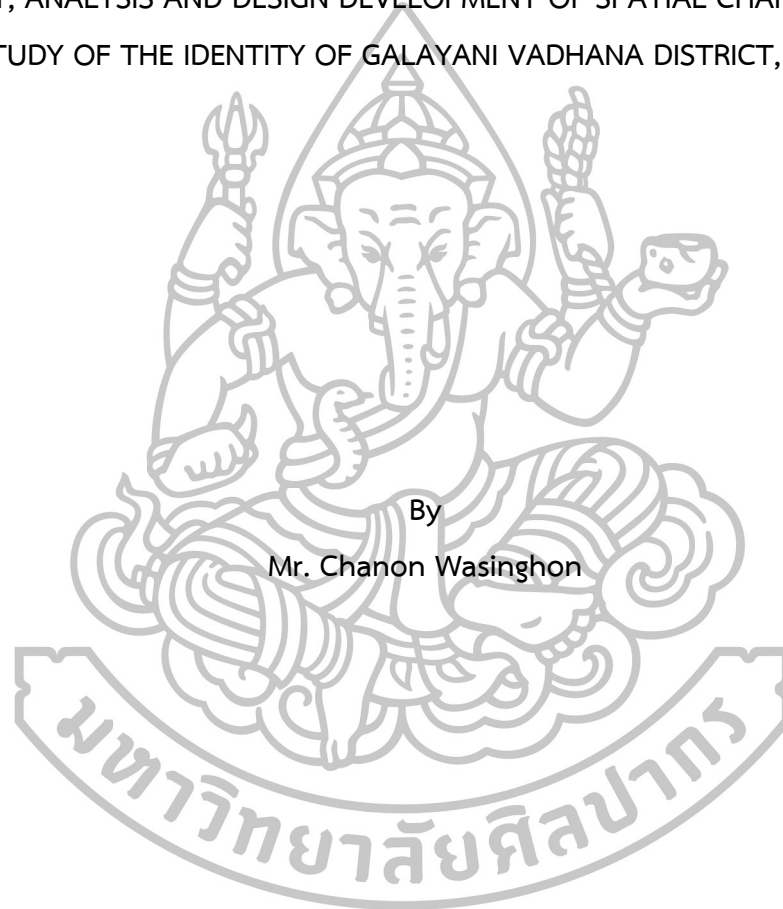




THEORY, ANALYSIS AND DESIGN DEVELOPMENT OF SPATIAL CHARACTERISTIC:
CASE STUDY OF THE IDENTITY OF GALAYANI VADHANA DISTRICT, CHIANG MAI



By
Mr. Chanon Wasinghon

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree
Doctor of Philosophy Program in Design Arts
International Program
Graduate School, Silpakorn University
Academic Year 2015
Copyright of Graduate School, Silpakorn University

THEORY, ANALYSIS AND DESIGN DEVELOPMENT OF SPATIAL CHARACTERISTIC:
CASE STUDY OF THE IDENTITY OF GALAYANI VADHANA DISTRICT, CHIANG MAI



A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree
Doctor of Philosophy Program in Design Arts
International Program
Graduate School, Silpakorn University
Academic Year 2015
Copyright of Graduate School, Silpakorn University

The Graduate School, Silpakorn University has approved and accredited the Thesis title of “Theory, Analysis And Design Development of Spatial Characteristic : Case Study of The Identity of Galayani Vadhana District, Chiang Mai ” submitted by Mr. Chanon Wasinghon as a partial fulfillment of the requirements for the degree of Doctor of Philosophy in Design Arts

.....
(Associate Professor Panjai Tantatsanawong, Ph.D.)

Dean of Graduate School
...../...../.....

The Thesis Advisor

1. Professor Eakachat Joneurairatana,
2. Assistant Professor Jirawat Vongphantuset, Ph.D.

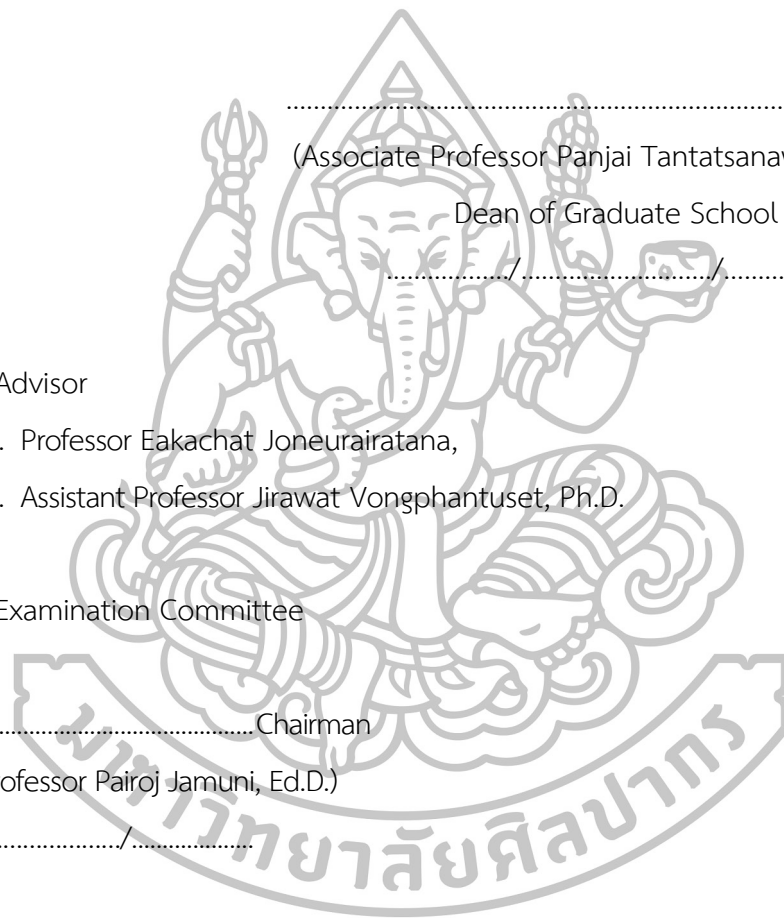
The Thesis Examination Committee

.....Chairman
(Associate Professor Pairoj Jamuni, Ed.D.)
...../...../.....

.....Member
(Professor Peter Pilgrim, MDesRCA. MCSD. FRSA.)
...../...../.....

.....Member
(Professor Eakachat Joneurairatana)
...../...../.....

.....Member
(Assistant Professor Jirawat Vongphantuset, Ph.D.)
...../...../.....



53155956: MAJOR: DESIGN ARTS

KEY WORD: GALAYANI VADHANA DISTRICT / SPATIAL / CHARACTERISTICS / PINECONE

CHANON WASINGHON: THEORY, ANALYSIS AND DESIGN DEVELOPMENT OF SPATIAL CHARACTERISTICS: CASE STUDY OF THE IDENTITY OF GALAYANI VADHANA DISTRICT, CHIANG MAI. THESIS ADVISORS: PROF. EAKACHAT JONEURAIRATANA AND ASST PROF. JIRAWAT VONGPHANTUSET, Ph.D., 174 pp.

This research investigates spatial characteristics of Galayani Vadhana district in Chiang Mai province, Thailand and explores the connection between the environment and the Karen people living in the area. The objectives of this study are to establish spatial characteristics of the district that portray the way of living and wisdom of the native Pgaz K’Nyau group of Karen, and to determine the attributes that are essential and valuable to sustainability of the local communities in order to apply the knowledge to develop an aesthetic design that expresses the identity of the area.

The research implements qualitative approach based on a community, employing multiple concepts and theories to find answers to questions of the research. The research is divided into three parts: 1) development of tools for analysis of Galayani Vadhana district area 2) development of the design process and design appraisal through recognition of the community, and 3) synthesis of the ideas to develop knowledge on designing for the community and concepts for development of spatial characteristics design.

Findings from the study covers five areas 1) the information and essence of Galayani Vadhana district 2) culture, rituals and wisdom of the Pgaz K’Nyau Karen 3) development of tools the identify characteristics of the community 4) development of the design based on the relationship between local community and the environment, and 5) the concepts of the design and product.

The outcome of the research is a product that introduces hidden unique characteristics, charm, and tradition of Galayani Vadhana district to the public through deconstruction of pinecones, making use of the form, shape and structure to present simplicity and versatility of functions.

Program of Design Arts

Graduate School, Silpakorn University

Student’s signature

Academic Year 2015

Thesis Advisors’ signatures 1. 2.

Acknowledgement

I hereby acknowledge the following for their contribution to this research investigation:

Professor Eakachart Joenurairat

Assistant Professor Jirawat Wongpantuset, Ph.D.

Assistant Professor Piroj Jamuni, Ph.D.

Fellow Ph.D. students.

Silpakorn University

Sripatum University.

Galayani Vadhana District.

Anchalee Siriwattanakul and my family.

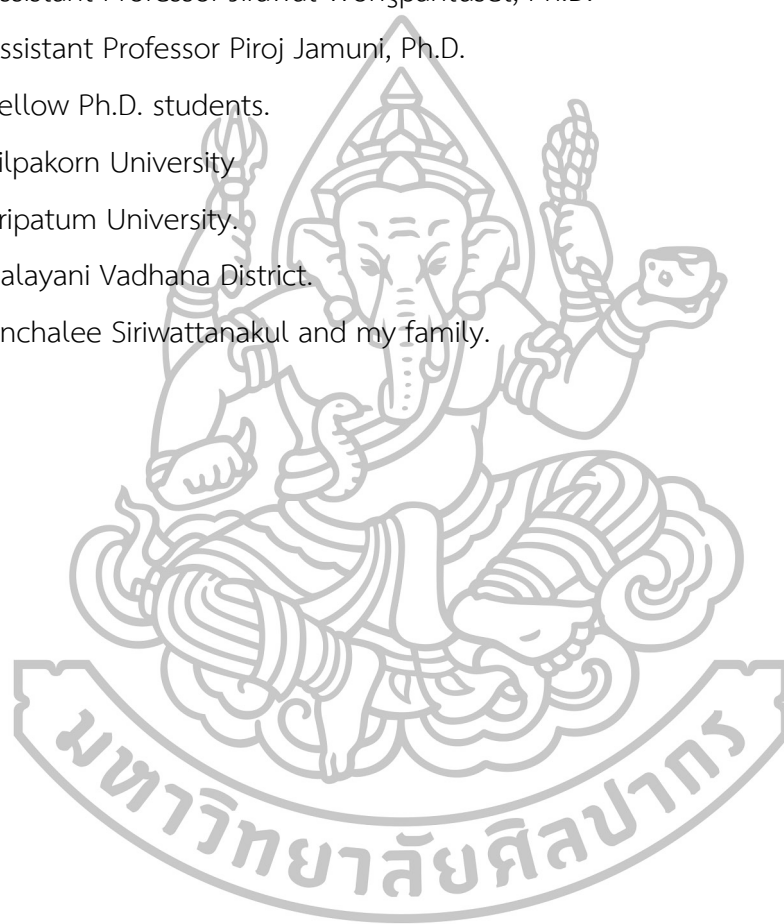


Table of content

	page
Abstract	iii
Acknowledgements	iv
List of tables.....	viii
List of figures.....	ix
Chapter	
1 Introduction	1
Significance of the problem	1
Aim of the research	3
Hypothesis of the research.....	4
Problems and question of the research.....	4
Scope of the research.....	4
Research outcome.....	7
Defined terminology.....	8
2 Literature review and related study.....	9
General information on Galayani Vadhana district.....	9
History of Galayani Vadhana district.....	9
Physical characteristics of Galayani Vadhana district.....	17
Natural resource.....	21
Karen in Galayani Vadhana district.....	25
Society, culture, tradition, ritual and perception.....	26
Summary of Galayani Vadhana district.....	41
Theories employed the research.....	42
Grounded theory	42
Holism theory	46
Contextualism.....	51
Postmodernism	53
Summary of theory	56

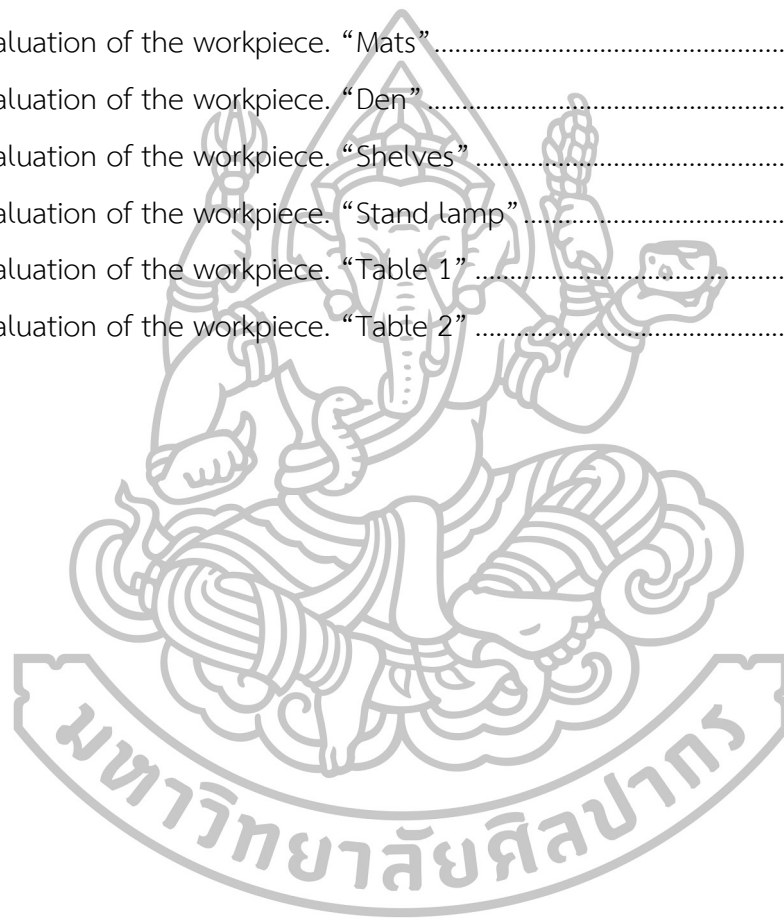
Chapter	page
Case study.....	61
Case 1: Burj Khalifa, United Arab Emirates	61
Case 2: Opera House, Australia	67
Case 3: Waipapa Maree - Maori Meeting Grounds, New Zealand	71
Case 4: Jean - Marie Tjibaou Cultural centre, New Caledonia	74
Case 5: Ceramic Museum and Mosaic Park, China	77
Case 6: Products design inspired by Mount Fuji, Japan	80
Summary of case study	82
3 Research Methodology	84
Development of tools for analysis of Galayani Vadhana district area	
The purpose consists of two steps.....	84
Development of tools to find characteristics of the district and	
inspiration for designing	88
Analysis of the design process and design appraisal through	
recognition of the community	92
summary of methodology	96
4 Design development	99
Introduction.....	99
Inspiration analysis from Galayani Vadhana district.....	99
Design for community	100
Analysis for concept development	103
Designing spatial characteristic.....	108
After design conclusion	128
Design Evaluation	128
Design for the development of design knowledge	138
Summary	146
5 Conclusion, Discussion and Recommendations	148
Development of tools for analysis of Galayani Vadhana district area	148
Analysis of the design process and design appraisal through	
recognition of the community	150

Chapter	page
Synthesis to develop knowledge on designing for the community and concepts for development of spatial characteristics design	161
Discussion	162
Conclusion	164
Recommendation	169
Suggestion for future research	169
References	170
Biography	174



List of Tables

Table		page
1	Gantt chart for study	7
2	The comparative of Differences between Reductionism and Holism Theory	50
3	General overview of the assessment	135
4	Evaluation of the workpiece. “Mats”	136
5	Evaluation of the workpiece. “Den”	136
6	Evaluation of the workpiece. “Shelves”	136
7	Evaluation of the workpiece. “Stand lamp”	137
8	Evaluation of the workpiece. “Table 1”	137
9	Evaluation of the workpiece. “Table 2”	137



List of Figure

Figure	page
1 Galayani Vadhana district.....	2
2 Galayani Vadhana in the winter.....	3
3 Research framework.....	6
4 Galayani Vadhana milestone.....	10
5 Wat Chan.....	12
6 Sri Chan Galayani Vadhana pagoda.....	14
7 Galayani Vadhana community signage.....	15
8 Princess Galayani Vadhana of Naradhivas’s picture (Right) inside Wat Chan temple.....	16
9 Map of Galayani Vadhana district.....	17
10 Pgaz K’Nyau (Karen) of Galayani Vadhana district.....	18
11 Climate and atmosphere in winter.....	19
12 Geography and natural resource.....	20
13 Pine forest.....	21
14 Pine leaf.....	23
15 Houy-Or reservoir.....	24
16 The Pgaz K’Nyau.....	25
17 Respect for the sacred.....	33
18 Karen’s house.....	34
19 Karen’s wedding ceremony.....	35
20 Karen’s clothes.....	40
21 Karen’s respecting spirits.....	41
22 The diagram of grounded theory systematic.....	45
23 Galayani Vadhana in in the Holism theory viewpoint.....	51
24 The diagram of Galayani Vadhana district in the Contextualism Approach.....	53
25 Different viewpoint making differential approach.....	56
26 The diagram of Galayani Vadhana district in grounded theory approach	57
27 The diagram of Galayani Vadhana district in holism approach.....	58

Figure		page
28	The diagram of Galayani Vadhana district in contextualism approach	59
29	The diagram of Galayani Vadhana district in post-modern approach	60
30	Map of United Arab Emirates	62
31	Hymenocallis	63
32	The development of shape and form	64
33	Attenuation of the shape	64
34	Y Shape Design	65
35	Burj Khalifa with a symbol of the country	66
36	Sydney OperaHouse	65
38	Roof concept of Sydney Opera House	69
39	Maori Meeting Grounds	70
40	New Zealand environment	71
41	The metaphor concept of Maori Meeting Grounds	72
42	Jean-Marie Tjibaou Cultural Centre	73
43	The tradition architecture and new design alongside together	74
44	The design that respects local knowledge	75
45	Ceramic Museum	76
46	The inspiration of ceramic museum	77
47	The combination of inspiration	78
48	The mount of Fuji	79
49	Various of product inspired by Fuji San	80
50	Experience from Galayani Vadhana district	87
51	The diagram of development of tools for analysis of Galayani Vadhana district area	97
52	The diagram of analysis of the design process and design appraisal through ecognition of the community	98
53	“Pine cone” inspiration from Galayani Vadhana	100
54	Various activities and behavior	101
55	Various activities and behaviour in different context	102

Figure	page
56 Personal space and social status	102
57 Analysis of circle.....	103
58 Small group sitting pattern	105
59 Medium group sitting pattern with leaders	105
60 Large group sitting pattern with leaders.....	106
61 Linear sitting pattern	107
62 Analyse the pine cone.....	107
63 The diagram of creating Spatial characteristic of Galayani Vadhana.....	110
64 Sketch idea of “Mats”.....	111
66 Sketch idea of “Den”.....	113
67 “Den”	114
68 Structural form studies	114
69 Sketch idea of “Shelves”	116
70 Shelves structure.....	117
71 Shelves with fabrics.....	118
72 Sketch idea of “Stand lamp”	120
73 “Stand lamp”	121
74 Sketch idea of “Table 1”	123
75 “Table 1”	124
76 Sketch idea of “Table 2”	126
77 “Table 2”	127
78 Evaluate by community	129
79 Evaluate by community	129
80 Evaluate by community	130
81 Evaluate by community	130
82 Evaluate by Agricultural space.....	131
83 Evaluate by Agricultural space Pine tree space	131
84 Evaluate by Pine tree space.....	132
85 Evaluate by Pine tree space.....	132

Figure	page
86 Evaluate by Mountain space.....	133
87 Evaluate by Indoor space	134
88 Evaluate by Indoor space	134
89 Sketch idea of “Smart table”	140
90 Sketch idea of “Smart table”	140
91 Sketch idea of “Smart table”	141
92 Sketch idea of “Smart table”	141
93 Sketch idea of “Smart table”	142
94 Sketch idea of “Smart table”	142
95 Sketch idea of “Smart table”	143
96 Sketch idea of “Smart table”	143
97 “Smart table”	144
98 “Smart table”	144
99 “Smart table”	145
100 “Smart table”	145
101 “Smart table”	146
102 Analyze the pine cone.....	151
103 Ritual of Galayani Vadhana district.....	151
104 Designing Mats.....	152
105 Designing Den.....	153
106 Designing Shelves.....	153
107 Designing Stand lamp.....	154
108 Designing Table 1	155
109 Designing Table 2	155
110 Table 1’s Impression on function	157
111 Mats’s Impression on aesthetics	158
112 Stand lamp’s Impression on being identity of Galayani Vadhana district	159
113 The SM[art] table.....	160

Chapter 1

Introduction

1. Significance of the Problem

Thailand is being surrounded by various forms of threats. It is necessary that the country and communities adopt civilization as an instrument to fight against threats and to be recognized globally. However, any country or community embracing civilization while disregarding its origin and native folk wisdom is similar to a tree without a taproot, devoid of strength to withstand imposing dangers. At present, a country can employ its culture as a weapon to protect against invasion by other nations by creating value-added to its local intellect, nature and environment.

Approximately 150 kilometers northwest of the city of Chiang Mai is the area covering around 50,000 rai (20,000 acres) of steep land that is a lush forest. The land is situated at 1,000 – 1,500 meters above sea level, making it fertile with Merkus pine and Khasi pine. It is considered the largest pine forest in Southeast Asia. The area was commonly known as “Wat Chan Pine Forest” before the government promoted it to a district named Galayani Vadhana.

The public’s perception of Galayani Vadhana district is that people in the area live a simple, rustic life without relying much on modern appliances. Local communities have strong outlook on nature, environment and their unique culture. In the simple yet wise perspectives of the local Pꨀaz K’Nyau or Karen tribe, every single natural resource is a living thing, similar to human. This view suggests that the cycle of physical environment and human’s living benefit each other and enable peaceful coexistence.

The Pꨀaz K’Nyau tribe has long-inherited rules on relation between people and the nature as well as on interaction between people and the community, identifying the significance of nature and the extent that a community is allowed to interact with nature.



Figure 1 Galayani Vadhana district.

William Lim (2005: 13) suggests that an area having unique identity and disorder which is natural status that can maintain its existence amidst rapidly-change utilization, as well as design inspired by disorganized ideas that sometimes lack theory and reasons may constantly add more chaos into the existing pandemonium; thus, an exciting and surprising state arises. If such state is not disturbed or managed, it shall autonomously adapt to survive the effects of globalization.

Without valuing the concept of unrestricted territory, we miss an opportunity to stop an invasion and destruction of the town. On the surface, each area may share similar characteristics. However, every area has its uniqueness that is the identity of the place and reflects culture and individuality of that specific area. (Lim, 2005: 18)

The researcher believes that nowadays every community wishes to develop distinct spatial characteristics that convey its identity through concrete elements, which suitably represent contexts of the area. In addition, the process acquired through characteristics development should be applicable to other areas with comparable capabilities.



Figure 2 Galayani Vadhana in the winter.

This research aims to explore the definition of the characteristics of identity, the theory of spatial characteristics, and to study a mechanism of the composition shared by science and aesthetics in order to apply the knowledge to design a product portraying the identity of Galayani Vadhana district. The understanding of spatial characteristics is a tool enabling a variety of design while decreasing complication of the process. Additionally, the knowledge may be applied as a foundation for further study or employed in the process of designing a community's identity.

2. Aim of the Research

2.1 To explore Galayani Vadhana district with the objective to find characteristics of the district and inspiration for designing.

2.2 To develop and evaluate design process through recognition of the community.

2.3 To develop knowledge on designing for the community and concepts for development of spatial characteristics design.

3. Hypothesis of the Research

Physical context and local culture of each area can be portrayed through a product which is an outcome of spatial characteristics designing.

4. Problems and Questions of the Research

At present, designing has been a part of every element in daily life. Social currents in the age of globalization have become more superficial and rapid in terms of thinking and lifestyle. Inadvertently, designers sometimes disregard appropriateness and context, resulting failure of the product to convey the concept or true identity. In addition, the individual and communities seem to have stronger desire to express their individuality and identity since the decline of Modernism. In the search for spatial characteristics, it is necessary to find out as much facts as possible so the research results yield what the designer can apply to develop a concept that expresses genuine identity of the community.

5. Scope of the Research

5.1 Scope of physical setting

This research studies the information on physical characteristics and culture in Galaylani Vadhana district, Chiang Mai, including three towns; namely Cham Luang, Baan Chan and Mae Dad.

5.2 Scope of theory

Main concepts and theories employed in this research includes;

5.2.1 Grounded theory

Grounded theory is the fundamental approach of this research as it is a methodology that requires profound understanding of the research area. By getting experiences in different dimensions, the researcher will be able to generate various interesting concepts and ideas. Data obtained from the field are the key to formulate the hypotheses deduced from repeated process. Observation and interview lead to comprehensive perspectives.

5.2.2 Contextualism theory

The connection or relation of elements in specific area or environment is conditions of the setting. The researcher needs to have an insight of both tangible and intangible conditions that create the value of concerned information before being able to develop it further.

5.2.3 Holism theory

Holism theory is applied to discover “the variation within differences” of elements that correlate with each other in multiple dimensions and are inseparable. Should the connection disrupted, the system shall be chaotic. Holism enables clearer scope of research and stimulates generation of new concepts through the connection of new relationship.

5.2.4 Postmodernism

This modern concept is a mainstream in education and design business. Results of ideas and interpretation shall be interpreted by the designer or researcher, leading to communication of distinctive view through the work. Thus, it is suitable as an instrument for designing for the community.

5.3 Scope of Design and Development

When designing involves the environment, it concerns how to integrate benefits from nature, natural composition, community, society, and human’s living into the work. During the process of defining the content and the form, the designer must consider the relation between space, the environment and activities or traditions and culture of that specific location.

5.4 Scope of Population and Sampling

A sample for this research is 50 persons from the population in Galayani Vadhana district. Data is collected through informal interview and participant observation, targeting stakeholders as follows:

1. Academics or experts – on context and beauty
2. Community leader – on history of the community and wisdom of the tribe
3. General resident – on product application
4. Local merchants – on growth opportunity of the product

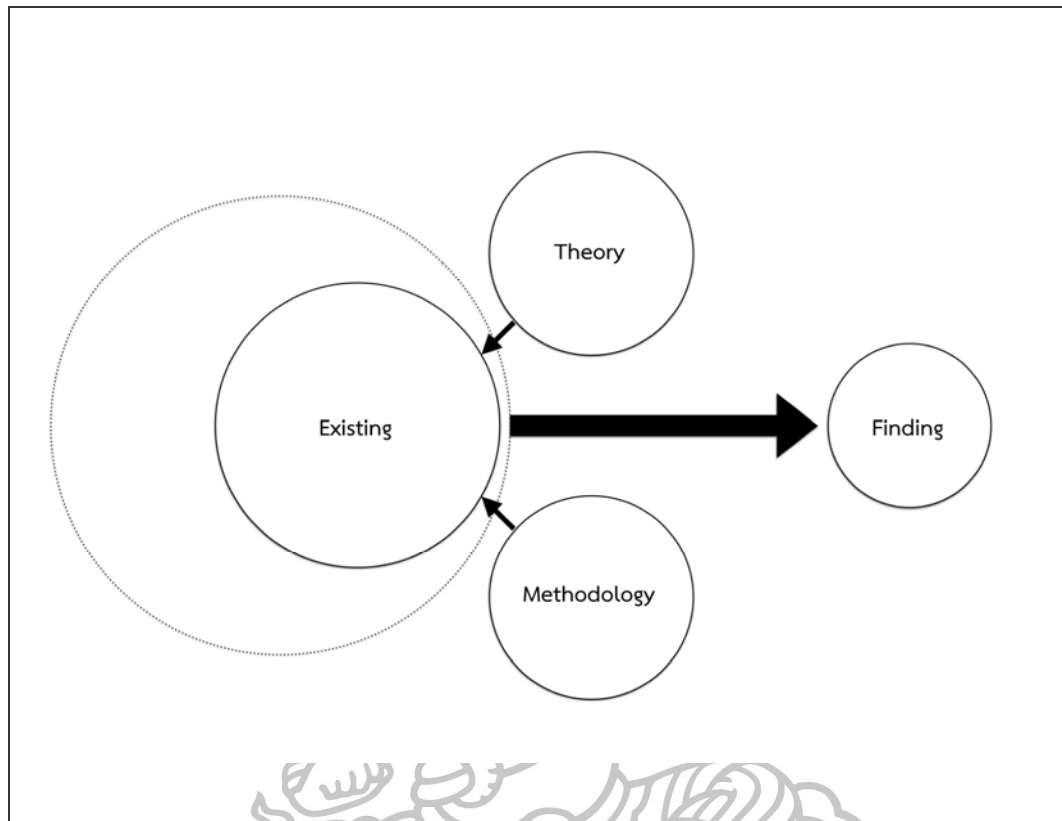


Figure 3 Research framework

5.5 Scope of study

In the study of this thesis on the basis of creating concept through the community or area, it must have the preparation, review, data validation, which takes a very special. Until the process design, development target, to evaluation by the community, and published works.

Table 1 Gantt chart for study

Academic	2010		2011		2012		2013		2014		2015	
	1	2	1	2	1	2	1	2	1	2	1	2
Preparation for research.	■	■										
Collect data.			■	■	■	■						
Data analysis					■	■	■	■				
Summary information to design.							■	■	■	■		
Concept development and design.							■	■	■	■	■	
Designing							■	■	■	■	■	
Evaluation by the community.											■	
Development work to design knowledge.										■	■	
Published and present research.							■		■		■	
Submitted thesis												■

6. Research Outcome

6.1 Concrete design of spatial characteristics

The outcome can be expected in several aspects. It can be an architecture or a monument situated in the community to represent the area. It may be a public product accessible by people in the community. The outcome can be a piece of furniture or accessories for home decoration or utilization. It shall be built or manufactured with local materials to convey the characteristics of the community that reflect surrounding elements and the way of life of the community.

6.2 Awareness of the community

People in the community becomes aware of their traditions and local characteristics, evoking appreciation of their hometown. In addition, the villagers or stakeholders may exchange knowledge and share pride in their community and their way of life, bringing improvement and changes to the community that lead to sustainable development in the future.

6.3 Economic opportunity

Once each community has a refined product that symbolizes their characteristics, economic opportunity will occur. The community can generate income, strengthening the economy from family level to district level. The product can be a medium to introduce the community to the outsiders through its beauty and function.

7. Defined Terminology

Galayani Vadhana district is the 25th district of Chiang Mai province, and the 878th of Thailand. It was founded on December 26, 2009 under the 2009 Royal Decree establishing Galayani Vadhana district, Chiang Mai province. The Office of Policy and Strategies under the Office of the Permanent Secretary for Interior, the Ministry of Interior set up Galayani Vadhana district to commemorate the 84th birthday of His Majesty King Bhumibol Adulyadej on December 5, 2011. The district was aimed to be a model for sustainable development.

Spatial characteristics mean characteristics of the space and its utilization that are distinctive and unique to the area. The characteristics identify environmental elements specific to the area. Spatial characteristics enable an integration of historical, sociological, ecological, theoretical and psychological contextual conditions with independent and discretionary ideas.

Pgaz K’Nyau or Karen means the tribe of people living in the north and in some provinces in the west of Thailand. The Pgaz K’Nyau people have their own language, culture and traditions. They can be recognized by distinguished clothing.

Ritual is a set of actions expressed in pattern by a man or a group of people. A ritual reflects people’s feelings toward different situations; for example, asking for pardon, merit making, cheerful events and welcoming ceremony.

Pinecone is a seed-producing cone of a pine tree. It has a unique cone shape. Pinecone is brown with wood-like texture. Size of pinecones vary from one to three inches

Chapter 2

Literature Review and Related Study

This chapter presents literature analyzed to define the research conceptual framework. The content covers three sections as follows:

Section 1 General information on Galayani Vadhana district

Section 2 Theories employed for the research

Section 3 Case study

1. General information on Galayani Vadhana district

1.1 History of Galayani Vadhana district

1.1.1 The Pkz K'Nyau (Karen)

At 156 kilometers northwest of Chiang Mai lies a mountainous terrain with narrow flatlands along the valley, spreading approximately 50,000 rai (20,000 acres). Around 85 percent of the area is covered with the forest at 1,000 – 1,500 meters above sea level. Merkus pine and Khasi pine thrive in the forest, making this place the biggest pine forest in Southeast Asia. This area is commonly known as Wat Chan Pine Forest. However, the native Pkz K'Nyau refer to it as “**Muchehki**”.

Though the area is sometimes called “Musikee”, the meaning remains unchanged as it is old Pkz K'Nyau word meaning “Mae Cham River fountainhead”. The name hints that the original settlers wished to state the importance of the land. The forbearers might want to keep their descendants reminded that the area is significant as it is a birth land of an important river, Mae Cham. Several creeks, Khun Cham, Hom, Cham Noi, Mae La Oop, Na Kled Hoy and Ya, meet to become Mae Cham River, which flows into Ping River and finally turns into the Chao Phraya River.

Pgaz K’Nyau is the name S’gaw (J’gor) Karen call themselves.

The inhabitation in Thailand of the first Pgzaz K’Nyau group has been narrated as oral history in form of folktales, as the Pgzaz K’Nyau people are storytellers. They use tales to pass on their culture, traditions, teachings and beliefs. There are hundreds or even thousands stories being told.

Even though folktales are not credible as historical evidence, they illustrate traces of the past. A particular story tells about the origin of the Pgzaz K’Nyau group. It is said Pgzaz K’Nyau was the eldest child of Sawa, the first human on earth.



Figure 4 Galayani Vadhana milestone

How the Pgzaz K’Nyau came to live in Thailand is told in the story about the old man called Taumaipa who was a headman of the village on Mount Tautiplaukau. His family quickly expanded until the land was insufficient for everyone to cultivate. Thus, Taumaipa and his family emigrated to find a new place.

The old man told his descendants to put a cane into the ground. Once they pulled the cane back, a hole would be filled. The action must be performed seven times and the hole would fill every time. Anywhere the mission was successful, that area was the right place to settle. It is said that Taumaipa's descendants set off to different directions to complete the mission. They found new settlement at the Salween River basin, the Irrawaddy River basin and also where the Mae Cham River originated.

In addition to a folklore, there are documents indicating every group of the Pgaz K'Nyau living in Thailand emigrated from Myanmar. Though the documents do not record the exact time, it is assumed that they arrived during the Ayutthaya period, when Thailand was in a war with Myanmar. Some documents suggest they immigrated into the Lanna Kingdom even before Yonok people, meaning they had lived in Thailand since before Chiang Mai was established.

One theory suggests that the Pgaz K'Nyau never emigrated. It states that in the past the land of the Pgaz K'Nyau, which shaped like a buffalo's horn, was situated between present day Thailand and Myanmar. When the official border between the two countries was determined, the Pgaz K'Nyau' land was divided into two parts; one in Thailand and the other in Myanmar.

1.1.2 The origin of Baan Wat Chan

The origin of Baan Wat Chan is also told by folktales. There are many stories telling about Baan Wat Chan. One claims that the name is derived from Chan temple (Wat Chan), the oldest temple in Khun Cham area which comprises three main towns: Baan Chan, Mae Dad and Cham Luang.

It is not apparent when the district was established. However, it is assumed to have existed for at least 300 years. The village's elders say it was called "Wat Chan" after a man named **Chan** who was from the Lanna kingdom. Chan was expelled from his family due to customary misconduct. He wandered into where it is now Baan Wat Chan and found the location to be appropriate to live, as the area was vast with Mae Cham River running through the east.



Figure 5 Wat Chan

Soon after Chan settled at the chosen area, there was famine at Lanna Kingdom. Nobody but Chan could alleviate the situation. Hence, Chan's mother sent people to summon him back to Lanna. Chan learned acknowledged situation but refused to return.

Eventually, he agreed to return with a condition that trees must be planted along the way to protect him from the sun and rain. Moreover, he would only return on human's back. His mother ordered for the trees to be planted on both sides of the way and had her subordinates lie down on the ground for Chan to walk on from where he resided to Lanna. The village was called "**Baan Chan**" since then.

Baan Chan was also known by P꧁az K'Nyau name as "**Hko Hkau T'**". The word "**hko**" means stupa. Hence, Hko Hkau T' means a village at the base of the stupa. There was one stupa in Chan temple before two more were built. One was located north of the village called "**Hko Klau Mau**" while the other that situated at the southwest was called "**Prathat Chom Chaeng**". All three stupas were constructed in the same period.

Another legend says this area used to be a thick forest without human dweller. The village was surrounded by thousand acres of pine forest. However, Baan Chan was full of temple ruins built by the Lua people who practiced Buddhism and used to live in this area before they abandoned the village, leaving the land uninhabited. This legend explains that the village was called Wat Chan since it is where Mr. Chan used to live and there used to be many temples; hence, **Wat Chan** or temple and Chan.

Later, a monk on pilgrimage from Myanmar named **Uttama** traveled to Wat Chan village and decided to rest there to meditate. An old man named Dooloy from Khun Cham Noi village and another old man called Kammuen from Huay Tong village came across the monk. The men had faith in the monk, so they brought food to the monk regularly.

It was inconvenient for both men to visit the monk everyday as their villages were far from Baan Wat Chan. Both men agreed to move into Baan Wat Chan. Initially, there were only four families. They then invited people from nearby villages to reconstruct the stupa under supervision of the monk. When the restoration was almost finished, Uttama the monk returned to Myanmar. He was seriously ill and deceased during the trip, leaving restoration unfinished.

In B.E. 2473 (A.D. 1930), another monk on a pilgrimage from a village by Pai River spent a night at Baan Wat Chan. He saw the unfinished stupa. Meanwhile, the Pgaz K'Nyau at Muchehki and the nearby area heard about the monk, so they came to pay respect to him. The monk then led those people to restore the stupa. Once it was finished, there was a 7-day ceremony to celebrate the installation of the stupa's top, presided by Kruba Srivichai, the monk highly venerated by the residents of Chiang Mai, who went to Samoeng district after the ceremony.



Figure 6 Sri Chan Galayani Vadhana pagoda

A documented record indicates that a man named Maula, who migrated from Mae Hong Son province, together with his family were the first to settle in Baan Wat Chan in B.E. 2336 (A.D. 1793). Shortly after, two other men, Dooloy and Sunahae, with their families moved in.

People at that time believed in spirits and it was a tradition that each leader must tend to different spirits. They could not live in the same place as there might be any misconduct that cause the spirits to punish people. Thus, the tree men had to live in different villages. Dooloy founded Hko Hkau T' village (Baan Wat Chan), Maula set up Plaodoh (Baan Den) and Sunahae founded Sunahae village (Baan Nong Ched Yod). The three men remained close and visited each other regularly.

In B.E. 2416 (A.D. 1873), a local family moved into Hko Hkau T' village (Baan Wat Chan). They discovered dilapidated old temples and stupas, so they consulted with the village headman and six other respected men; Maula, Dooloy, Sunahae, Leh, Koo and Dammuen, to renovate three stupas.

The information about stupa restoration corresponds to the aforementioned record about Wat Chan. Therefore, it is likely the area used to have temples, giving the name Baan Wat Chan or a village where there are temples.

1.1.3 The establishment of Galayani Vadhana district

The initiative to establish a new district in the area can be traced to B.E. 2536 (A.D. 1993). On May 17, 1993, the Baan Chan Town Council proposed to promote three towns in Mae Cham district to a sub-district. The preparation to establish a new sub-district had proceeded for years. Unfortunately, the financial crisis that struck Asia in 1997 made the government cancel new district establishment plan to avoid economic problems. The plan was reconsidered in 2005. Chiang Mai province in collaboration with the Department of Provincial Administration, Ministry of Interior studied the possibilities and prepared a proposal for this purpose.



Figure 7 Galayani Vadhana community signage

Baan Chan, Mae Dad and Cham Luang towns in Mae Cham district, Chiang Mai province covers the area of 674.58 square kilometers, with 10,561 population. These three towns are the home to many royal projects. They had potential as travel destination. However, geography of the area was mountainous with lush forest, making transportation to governmental offices at Mae Cham town hall inconvenient. For the same reason, public services fail to reach some areas of these towns. In addition, the towns faced narcotic problems and deforestation. For these reasons, the cabinet agreed on December 2, 2008 that the three towns should be promoted to a new district to honor Princess Galayani Vadhana of Naradhivas, who passed away earlier that year.

On July 7, 2009, His Majesty King Bhumibol Adulyadej bestowed the name of the new district as “**Galayani Vadhana**” as proposed by the Ministry of Interior, replacing the former name of Wat Chan.



Figure 8 Princess Galayani Vadhana of Naradhivas’s picture (Right) inside Wat Chan Temple

1.2 Physical characteristics of Galayani Vadhana district

1.2.1 Adjacent territories

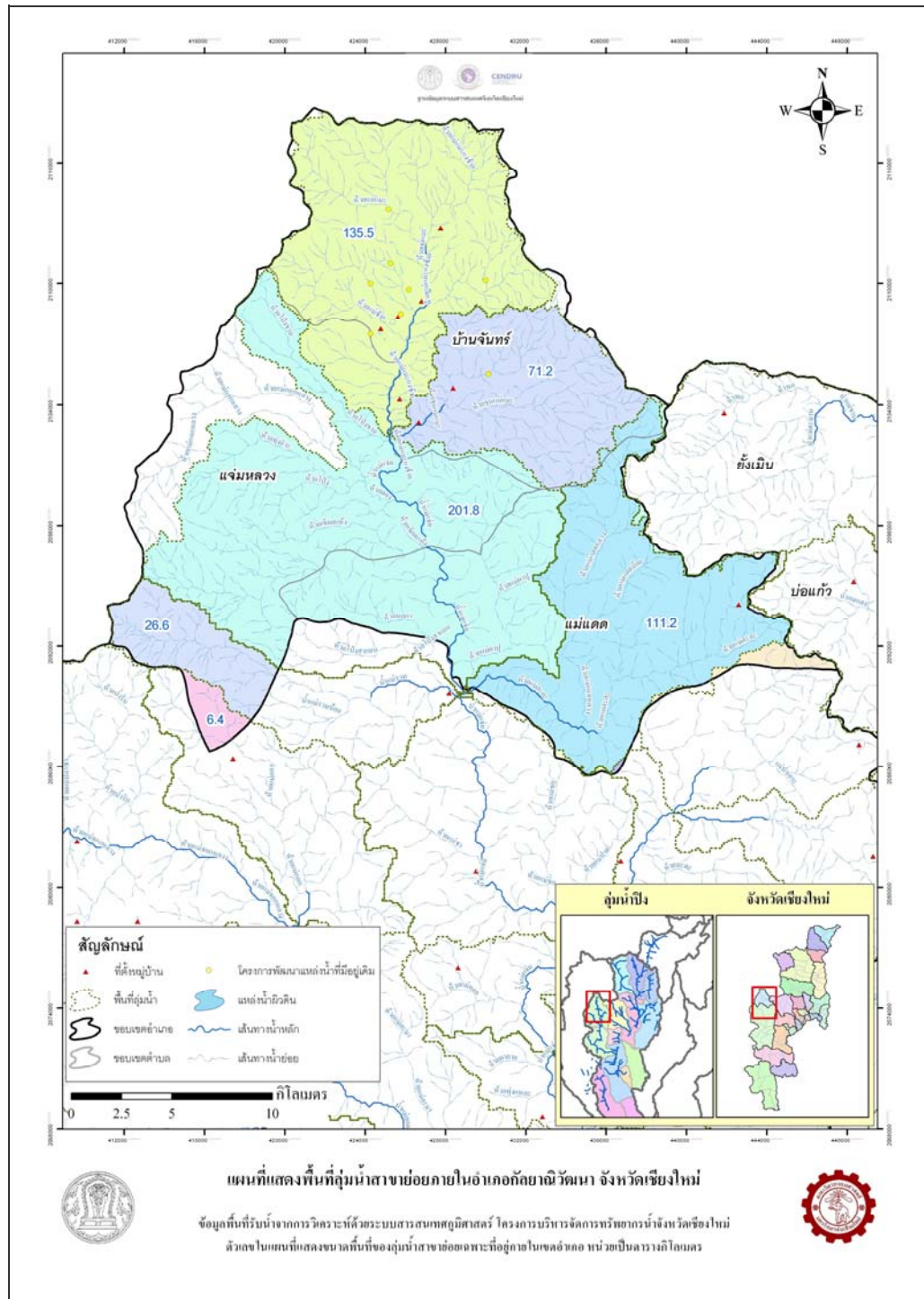


Figure 9 Map of Galayani Vadhana district

North: Pai district, Mae Hong Son province

East: Samoeng district

South: Mae Cham district

West: Amphoe Muang Mae Hong Son district, Mae Hong Son province

1.2.2 Population

A record of the year 2003 showed total population was 5,016, consisting 2,518 men and 2,498 women. Most populated villages were Baan Nong Ched Nuay, Baan Nong Dang, Baan Den, Baan Chan and Baan Huay Hom respectively. Baan Huay Ya Tai was the least populated village.



Figure 10 Pgaz K'Nyau (Karen) of Galayani Vadhana district

Source: Blogspot [pseud.], [kalayaniwattana_096](http://2.bp.blogspot.com/-TYIAJ8vxyt8/Uzn8a3CjLxl/AAAAAAAAADpk/2SQL380fd-Q/s1600/kalayaniwattana_096.jpg), accessed August 3, 2016, available from http://2.bp.blogspot.com/-TYIAJ8vxyt8/Uzn8a3CjLxl/AAAAAAAAADpk/2SQL380fd-Q/s1600/kalayaniwattana_096.jpg

1.2.3 Climate

According to the meteorological data recorded by the Northern Meteorological Center, average temperature during 1999 – 2001 was 19 Celsius. The lowest temperature was 0.1 Celsius in December, whereas the average highest temperature was 37.4 Celsius. The average annual rainfall was 1,225 millimeters.



Figure 11 Climate and atmosphere in winter

1.2.4 Geography

Galayani Vadhana district is a habitat of the Pgaz K’Nyau (Karen) people. They have their own culture, traditions, clothing as well as spoken and written language. Their way of life is simple. They are peaceful people who have strong relationship with their relatives. Baan Chan town is situated along the Mae Chan River. The town is the home to thousands acres of pine forest. The temperature drops below zero every winter. The area is commonly laced with fog, creating serene atmosphere.

Galayani Vadhana district is located at the altitude 900 – 1,600 meters above sea level. Most area is at 1,000 – 1,100 meters above sea level, comprising 44.03% of the district. The height at 1,100 – 1,200 meters above sea level covers 22.11% of the district, followed by the area at 900 – 1,000 meters, equaling 14.88% of the place. Other areas situated at 1,200 – 1,300 meters, 1,300 – 1,400 meters, 1,400 – 1,500 meters and 1,500 – 1,600 meters above sea level covers 14.88%, 13.01%, 5.11%, 0.69% and 0.16% of the district respectively.

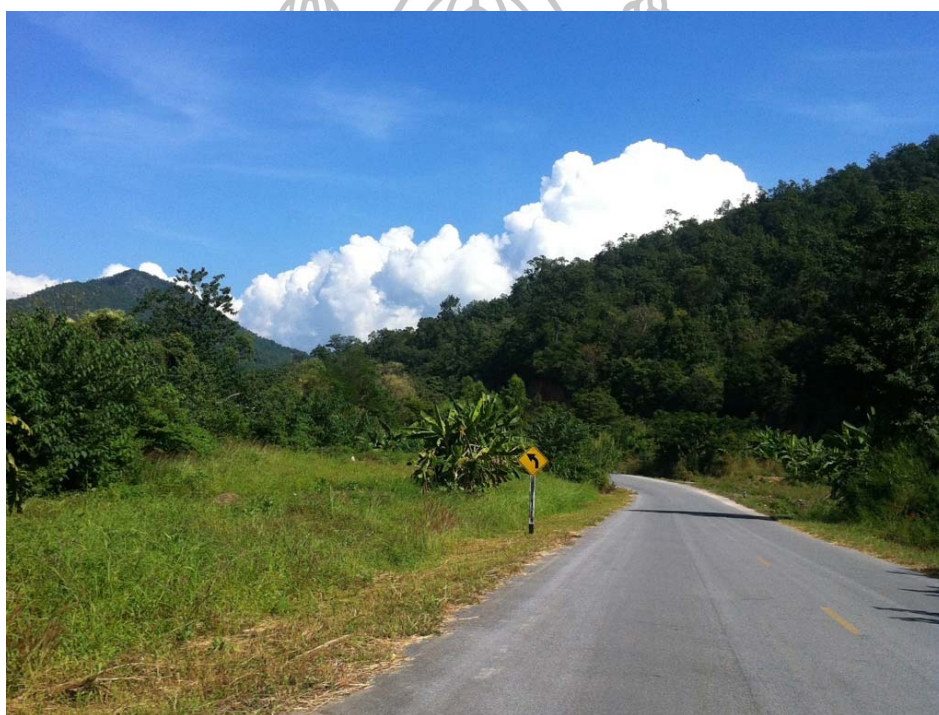


Figure 12 Geography and natural resource

Up to 36.68% of the district have a grade level at 0 – 2%, mostly in the center of the district. The area with a grade level at 50 – 75% covers 20.84% of the district. Mountainous area at the west, north and east of the district equaling 20.25% of the district is at 35 – 50% grade. The northwestern part, where a grade is higher than 75% is 5.34% of the district.

1.3 Natural resources

1.3.1 Forest

Pine forest: The pine forest is classified by main species trees in it. Merkus pine and Khasi pine are prominent in pine forest. Higher level of the forest consists solely of pine trees. Normally a pine forest is located at the same level or below the tropical rain forest, but it is found where the soil is drier or having poor water retention. This type of forest can be found at 200 – 1,800 meters above sea level. Pine forest in Thailand is mostly in the north or northeastern part of the country.

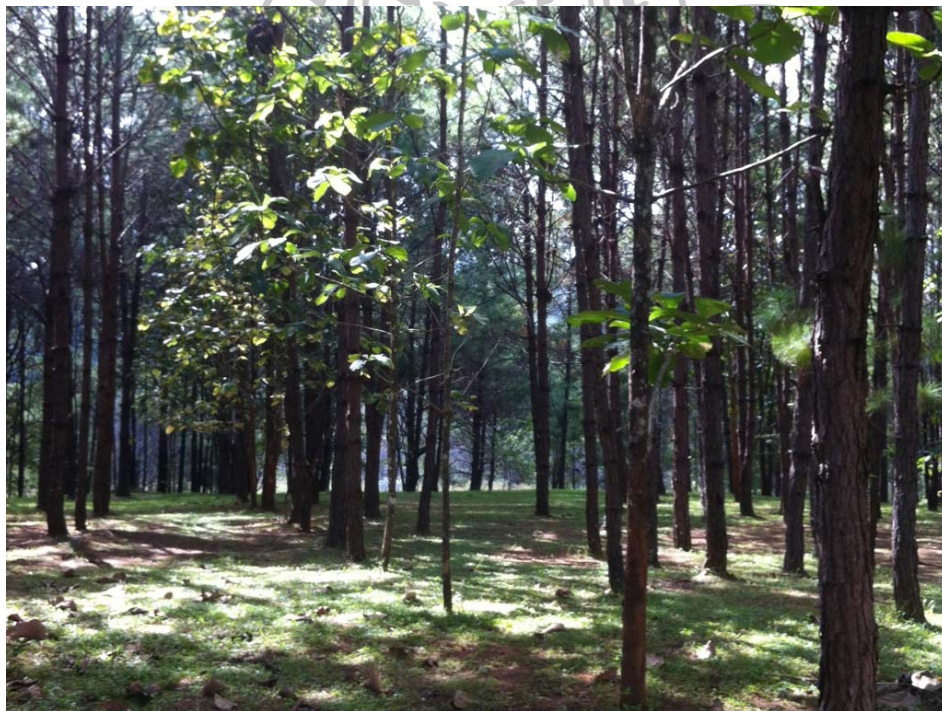


Figure 13 Pine forest

Three-needled pine: Three-needled pine is commonly known by its botanical name as Khasi pine. The scientific name of Khasi pine is *Pinus kesiya* Royle ex Gordon in the Pinaceae family. It may be called by other names in Thailand, depending on where it is found. Other names include Kia Pluak Bang (Chiang Mai), Pak Lom (Chaiyaphum), Pak (called by Chan tribe at Mae Hong Son,

Phetchabun), Kia Pluak Dang (northern Thailand), Chuang (northern and northeastern Thailand), Son Khao (central Thailand) and Chiangbang (called by Karen people in Mae Hong Son).

Khasi pine is a medium-size to large perennial plant. It usually reaches 10 – 30 meters in height, with 30 – 40 centimeters in diameter. The straight bole is free of branch while leaves at the canopy spread out in circle. The pinkish brown bark has longitudinal fissures shaped like a net. It propagates by seeds and flourishes in loam or sandy loam. Khasi pine originates in Myanmar and spreads to India, Indonesia, Myanmar, Malaysia and the Philippines. It usually grows in group on a mountain or along mountain ridges at 1,000 – 1,600 meters above sea level. In Thailand, Khasi pine is found in the north, northeast and central regions in pine forests at the altitude 800 – 1,600 meters above the sea level.

The slender and long needles are in a bundle of 3 needles in zigzag position. They are about 10 – 25 centimeters long. The needles' rims shape like fine saw teeth.

Pine cones are in cluster. Yellow male cones present in bundle near the end of the branch. Each bundle is 2 – 4 centimeters long. Female cone present alone or in 3 seeds at maximum at a twig during November to January.

Khasi pine cones are hard, ovoid, 5 – 8 centimeters long. Scales of mature cone usually open, but the umbo still attach to the core. Inside each scale are oval-shape seeds with winged membrane that is four times the length of the seed. Cone stem may grow to 0.5 centimeter long. Khasi pine cones pollinate during December to March.



Figure 14 Pine leaf

Khasi pine timber is used for housing construction or made into indoor furniture; for example, table, bed, wall, floor board, beam, blackboard, furniture, storage boxes, musical instruments, ship mast and even as firewood. Khasi pine wood is also suitable as pulp to make paper. Gum or resin can be made into turpentine and dammar. Turpentine can be further turned into other products such as varnish, soap and mixed with paint. Gum can be mixed with medicines or processed into other products; for instance, glue, paper and artificial rubber. Dammar is good for strings of musical instruments as well as in fabric dyeing. Straight form of the trunk and bundle of leaves at the canopy make Khasi pine nice as garden plant. This evergreen tree provides wide yet sparse shade. People enjoy walking on or lying down on the soft needles shed on the ground. Tourists love taking pictures of Khasi pine since it usually grows in large clusters due to its propagative nature. Khasi pine also has a role in conserving the headspring.

1.3.2 Water

Stream: A large area of Galayani Vadhana district is located at the upper part of Mae Cham River basin. The upper Mae Cham River is the main river, having 20 distributaries that can be listed from the upper part of Mae Ngad River to the end of Mae Cham River as follows; 1) Mae Cham Noi 2) Mae La Oob 3) Tong 4) Mae Tala 5) Mae Ruam 6) Mae Ao 7) Sa-nga 8) Mae Moo 9) Mae Jon Luang 10) Mae Waak 11) Mae Yod 12) Mae Suk 13) Mae Uam 14) Mae Paan 15) Mae Rak 16) Mae Longka 17) Mae Khan 18) Mae Toom 19) Mae Ka and 20) Mae Takian. Mae Cham River flows into Ping River at Hang Dong, Hot district, Chiang Mai. The area at the head watershed is a steeply sloping ground.

Swamp, marsh and pond: Water from natural catchment in Galayani Vadhana district is mainly used for fishery, followed by agriculture and feeding livestock. Domestic industry rarely use water from natural resources.

Irrigation infrastructure:

Reservoir and weir

There are nine existing small reservoirs, ponds and weirs scattering in the northern part of Galayani Vadhana district.



Figure 15 Houy-Or reservoir

1.4 Karen in Galayani Vadhana district

Galayani Vadhana district is a home to many ethnic groups such as Karen, Hmong and Lisu. Their major source of income is agriculture. Weaving is another way to support the family.

The Pgaz K’Nyau, also known as S’gaw Karen or Karang, is a group of Karen people with unique culture and traditions. There are evidences that they have settled at the basin along the Tanasserim range, at the border between Thailand and Myanmar, for a long time. The Pgaz K’Nyau have lived in scatteredly in Thailand for approximately 100 – 200 years. Some of them live in Mae Wang River basin at Mae Wang district, Chiang Mai.

The Karen divide into many groups. They speak different languages and practice different religions. Originally, the Karens respect spirits, trees and forest. They later adopted Christianity and Buddhism among other religions. Karen used to live in Myanmar. However, the war forced them to migrate into Thailand. The Karen in Thailand are from four groups:



Figure 16 The Pgaz K’Nyau

Source: Tour on Thai, **Gallery, 769.jpg**. accessed August 3, 2016, available from http://www.touronthai.com/gallery/place_member_gallery/3000089/769.jpg

S'gaw: S'gaw call themselves Pgaz K'Nyau meaning human. They are the largest tribe of Karen in Thailand. They have their own written language developed from Burmese and Roman scripts by a missionary. Members of the group mostly converted to Christianity.

Poe: This group strictly adheres to their tradition. The majority of them live at Mae Sariang district in Mae Hong Son and Omkoi district in Chiang Mai.

Bwe: The Bwe group lives in western Thailand at Khun Yuam district, Mae Hong Son.

Pa-O (Taungthu): Only a few members of this group lives in Thailand.

Each tribe of Karen people has unique speaking and written languages, adapted from Burmese and Roman scripts.

1.5 Society, culture, tradition, ritual and perception

1.5.1 The way of living and beliefs of the Pgaz K'Nyau:

The Pgaz K'Nyau practice shifting cultivation. Cultivation begins at the end of March soon after the land is burned. By the end of April, some vegetables are ready for harvest; for example, young lettuce and pumpkin leaves planted by the bank of the creek. There is a song narrating plants that can be harvested in this particular period. The lyric says "April is coming to the end and May is approaching. The rain makes lettuce seeds sprout, carpeting the whole field with green."

In the middle of May, when rainy season begins, seedlings sprout. Vegetables such as young red basil, gourd, cilantro, parsley, spring onion and mint can be picked. May is the time that every bulb and seed sprouts. Amaryllis is the symbol of May. The Pgaz K'Nyau have a saying "Amaryllis blooms in May."

June is when bamboo shoots grow abundantly. Other local vegetables also flourish in June; for instance, luffa gourd, sponge gourd, tapioca, cotton, okra, bitter gourd, chayote, mint, spring onion, cilantro, lemongrass and chili.

July is when the Pgaz K'Nyau harvest young leaves and lettuce. August is the time to pick corn. Some young gourds can be harvested as well.

From September to December, various crops are ready for harvest. November is the most bountiful month as so many plants yield produce, especially gourds and tubers. It is also the time to harvest rice, the main crop.

Shifting cultivation and knowledge on how to preserve the soil when practicing the particular method is crucial. The Pgaz K’Nyau do not turn the soil completely over. They keep stumps when cutting down the trees so they hold lower layers of ground, preventing damages. Additionally, they do not cultivate in the upstream forest. They only do agriculture at less steep areas where the temperature is warm. Hence, the soil is drier and stronger. Trees in the chosen area are not large. The ground is restored within 7 – 10 years. Their way of cultivation does not put much burden on the soil. Slash-and-burn agriculture would put much burden on the ground at the head watershed forest or tropical forest that has never been cut for agriculture before.

Their clever and meticulous way of cultivation is a wisdom in how to preserve the soil and prevent landslide. The method is developed from experiences and conscience to pay back to the “forest”, which includes the soil, water and plants that are interrelated.

There are 12 months in the Pgaz K’Nyau’ calendar. Each month is scheduled with agricultural activities.

1st month: “La T’Lei” - January

Two months after harvesting the previous year’s crops or in early February, before new slash-and-burn activity begins, the Pgaz K’Nyau celebrate New Year or “Ni tau hko”. Each family holds a feast and a ceremony to recall personal protecting spirit of family members. The entire village arranges a ceremony to pour water to the elders in the village, asking for their blessings. The villagers take turn pouring alcohol drink at each house in the village. They drink and sing while performing the round. This is an opportunity to discuss about village governing, living conditions and mediating problems in order to have a smooth, strong new year. It is also a chance for them to ask for permission and blessings from the supernatural for their next harvest as in the following song.

“Oh, the supreme lord of the land

Oh, the supreme lord of the water
 We pour you alcohol when we drink
 We offer you rice when we eat
 Since you receive our rice and alcohol
 Please bless us for smooth cultivation”

2nd month: “La T’Hpai” - February

Selecting location for cultivation:

After a New Year celebration, the Pgaz K’Nyau select the location for new round of cultivation. The village headman selects first, then the villagers follow. They have many restrictions in choosing the location. Cutting down the trees where there is a spring is prohibited. If the trees were cut down at the front of the mountain in previous season, it is now allowed to cut at the back side of the same mountain in present year. If the top of the mountain was cultivated in the previous year, the bottom part must be preserved for present year. If one side of the creek was planted last year, the other side cannot be cultivated this year. These restrictions emphasize their awareness of the effects on the soil, water and forest. The Pgaz K’Nyau may reap benefits from natural resources but they conserve nature at the same time.

Cutting down the trees:

Tree cutting is a group activity as the farming area is vast. It would take too long for a family to work on their own. This is a condition that facilitates cooperation. They do not cut down big trees, but slash only branches. Even when slashing branches, they leave few branches at the top as a “perch for a minivet”. Actually, branches are reserved for photosynthesis purpose so new branches can grow out later.

Those who plant rice will get the equipment and prepare the rice beds.

3rd month: “La T’Hku” - March

Airing out the farm:

After trees were cut, they are left to dry on the land for 2 – 3 weeks before being burned.

Anyone who grows rice prepares the beds, plants the rice sprouts and tests water system this month.

4th month: “La Seh” - April

Burn the land:

Once the land is completely dry, the Pgaz K’Nyau prepare firebreaks before they burn the area to control the fire, as the forest and ecology systems can be greatly affected if the fire spreads.

When the firebreaks are finished, they burn the land. Normally, the period falls on April 7 – 15. There is a specific instruction on how to perform the task. The fire must start from the top of the area. When the fire is far from the firebreaks, another fire will be set at the bottom of the area. The way the fire is set can prevent wildfire.

Occasionally, the fire goes out of firebreaks. In this situation, the entire village helps extinguish the fire. They even have a vocabulary for this activity.

When the area is burnt but the smoke is not yet dying down, the person who will tend to the farm would put a stick in the middle of the area as a mark. He would also plant a particular berry. It is believed that the berry would prevent against plant eating insects and blight.

Clearing the land:

The morning after the farm was burned, women would go to grow plants such as corn, wheat, pumpkin, taro and cassava. They believe planting the day after the land was burned would yield strong and abundant crops. After planting is done, they gather burnt wood and twigs to burn again. The ash from wood that is burned for a second time is nourishing for rice and vegetables grew in the area.

During this month, men would build a fence to prevent animals from wandering in to eat the crops. They also build a hut as a resting place while tending to the farm.

Rice growers start planting.

5th month: “La D’Yah” - May

Planting:

May is the time to start planting. The entire village work together again. Before planting, they perform a ceremony in which a young couple whose parents are still alive perform initial planting. The man makes a hole and the woman plants a sprouts in that hole. They would pray for fertile crops while performing the ritual.

After planting is done, before everyone returns home, there must be another rite inviting a bird that is supposed to protect the rice and the soul of the rice to visit the field so the crop is abundant. The rain is also summoned.

The Pgaz K’Nyau dig shallow holes at about the size of a deer’s hoof. The intention is to protect the soil and keep it rich.

Rice farmers check water level and get rid of weeds.

6th month: “La Nooi” - June

Weeding:

When the plants grow, weeds also sprout. Thus, they must be removed. The Pgaz K’Nyau weed several times through the season. The first weeding is called “removing first weeds”, whereas other rounds are called “removing young weeds”.

The Pgaz K’Nyau use special tool made specially for weeding. The tool digs less soil, and does not damage tree roots and bamboo shoots. This tool cultivates the soil, enhancing the growth of rice and plants. Weeds are collected into a pile and covered with soil. Soon after, the removed weeds turn into compost for the plants.

Rice growers inspect water level and get rid of weeds.

7th month: “La Hkaw” - July

Apologizing to the supernatural:

Weeding continues until August, then the Pgaz K’Nyau have a ritual to apologize to the nature and supernatural for having burned the land. They then ask the supernatural to make the crops plentiful. Rituals to chase evils from the farm and prevent bad things from entering are also performed.

People who grow rice inspect water level and get rid of weeds.

8th month: “La Hkoo” - August

August ceremony:

After apologizing to supernatural, there will be a ceremony performed by the entire village called “August ceremony” after the month. The procedure is exactly similar to the New Year ceremony from preparing food, summoning personal protecting spirits, asking for blessings from the seniors to giving alcohol at every house.

Differences between the August and New Year ceremonies are the time and meanings behind the ceremony. The August ceremony aims to express gratitude and praise the supernatural for blessing their farm work. The crops have grown well; therefore, they ask for more blessings for the arriving harvest season.

Rice growers continue to check water level and get rid of weeds.

9th month: “La Si Mu” - September

The rice is mature and 90% of crops can be harvested.

People who grow rice check water level and get rid of weeds for the last time.

10th month: “La Nsi Ca” - October

11th month: “La Nau” - November

During October and November, the rice can be harvested. Rice harvesting is the activity participated by the whole village, particularly young people. Harvesting is made in pair; one person cut the rice while the other tie the bundle. The process displays their way of assisting others.

Before the rice is cut, there is a ritual to eat new rice with foods taken from the ground and water such as crab, fish and vegetable fern. This ritual represents the act of asking for pardon from the rice that will soon be eaten with everything. They ask that the rice will not cause any harm to people who eat it, and also express gratitude to the equipment used to grow the rice.

After the rice is cut, there is a rite asking for the rice to conveniently fall off the ear and be plentiful enough to consume the entire year. Then, they thresh rice and store in the shed before carrying it home.

The day after threshing rice, there is a ceremony to expel evils from the rice shed. During the ceremony, they also perform a ritual to send the bird that supposedly protects the rice back to heaven before returning next year. The Pgaz K'Nyau believe the bird makes the rice abundant. When the ceremony is finished, they carry the rice home. The rice stored in the shed that is insufficient to carry home is used to make alcohol. This specific batch of alcohol is called "leftover at threshing shed". Family members and neighbors will be invited to drink the "leftover at threshing shed" alcohol as a way to thank the nature for bountifulness.

12th month: "La Plu" - December

Harvest season is over, flowers are blooming:

When the harvest season is over, the next two months is a period called "harvest season is over, flowers are blooming" as cockscomb flowers are in bloom, painting the field with red and white colors.

It is a duty of women to harvest gourds and tuber plants. A selection of seeds of the harvested crops will be kept to grow the following season. They collect the wood formerly used as a farm fence back to use as firewood.

1.5.2 Souls of the Pgaz K'Nyau

The Pgaz K'Nyau people used to live in the forest. They have passed on way of living, rules, tradition and religion. They believe in unity, helping others, sharing and giving. The Pgaz K'Nyau value the importance of human. They believe human is the best form of creation. Everyone has value and dignity that cannot be destroyed. The relationship between human and the environment can be identified in three perspectives as follows:

1. The relationship between human and the supernatural signifies the symbol for the holiness, which represents the ultimate value that human look up to. Human tries to achieve goodness and safety. They hope the power of the holiness can help fulfill their wishes.

2. The relationship between human is expressed through brotherly love, assistant and sharing. They must not abuse or bully others. The most important value that the Pgaz K'Nyau have put across for generations is sacrifice. Community members are taught to be selfless.

3. The relationship between human and nature shows the capability of human to invent by learning from nature and the environment. The invention complies with nature and makes living more comfortable.



Figure 17 Respect for the sacred

1.5.3 Occupation

The Pgaz K'Nyau work independently. Originally, most Karens tend to farm in the forest. They plant seasonal vegetables. Animals are kept to be food rather than to sell. The Karen people rely on nature and live together in a large group.

1.5.4 Housing

The Karen usually build a raised platform house with a porch. Some live on flatland. They prefer to settle at certain location rather than migrating.



Figure 18 Karen's house

1.5.5 Culture and tradition

The majority of the Karen's rituals involve offering chicken and alcohol to spirits while tying the wrist of ceremony attendants with raw cotton thread. Other ceremonies are as follows:

1. Wedding

Karen women choose their own husband. A woman is the one who proposes. The bride must weave shirt, pants and a bag for the groom. The couple must kill pigs and chickens as an offering to the spirit of their ancestors and as food for the wedding guests. The groom must move into the bride's family for one harvest season before the couple move out to build their house near that of the woman's parents.

The process of asking for the hand goes like this. When the woman's family are aware that the couple wishes to live together, they send someone to meet the man to ask if he really loves her and agrees to marry. If the man confirms his intention, a wedding date is determined.

When a wedding date is set, family of the man sends a middleman to arrange an engagement before the date. The bride-to-be's family must kill two chicken to cook for the middleman. Next day, the time that the groom and his friends come to meet the bride for the wedding is then scheduled.



Figure 19 Karen's wedding ceremony

Source: Bloggang, **Anakin saw**, accessed August 3, 2016, available from <http://www.bloggang.com/data/anakin-sawl/picture/1204442560.jpg>

2. New Year

The village headman announces a day to celebrate New Year ceremony in advanced. A New Year day can be different by villages. The New Year ceremony symbolizes the beginning of agricultural season and the period of prosperity.

1.5.6 Religion, belief and ritual

The Karen used to believe in spirits. They had strict regulations on how to perform a ritual and offer to spirits. Though the Karen have converted to Christianity and Buddhism, their beliefs in spirits remain. Some beliefs the Karen still hold are about personal protecting spirit, asking for permission from a place protecting spirit before doing activities, and appealing to spirits of their ancestors for support and blessings for successful activities, bountiful cultivation and peaceful life. Some of the rituals signify the intention to apologize to the deceased ancestors and spirits for unintentional wrongdoings.

1. Buffalo blessing ritual

This ritual is exclusive to families that keep buffaloes. It is performed once yearly, after the ploughing season passes, normally on Thursday. It is crucial that the ritual is performed before rainy season is over. Every family member must be presented. Those who are away are summoned to return. The person who performs the ceremony is selected by cast lots conducted by a shaman using rice, leaves, egg, chicken bone, or reading palm lines. The selected person can be any gender; however, this buffalo blessing ritual must be performed by selected person only, or else the buffalo may become ill or die. The Karen are grateful that buffaloes help them in daily life. The ceremony conveys their gratitude for help received from buffaloes and a bond between human and animals. It is a chance to bless the buffaloes for good health and fertility.

The ceremony begins when the performer carries a pair of cooked chicken as an offer to a corral. Then the performer puts a band of cotton thread around horns of each buffalo the family owns and insert a candle between a thread band and a horn. The rice is scattered and water mixed with herbs is sprinkled. While sprinkling the water, the father of that family chants a blessing.

Finally, alcohol is offered to buffaloes or pour on the bovine's head. After the ceremony is done, the family takes the chicken offering back to eat. Relatives and neighbors are invited for a meal.

2. Expelling evils and sickness from the village ritual

There are many ceremonies in the Karen's way of living; however, the only ceremony performed for the entire village is this ritual. It is originated from an assumption that when several villagers fall ill without apparent reason at the same time, it happens because of an act of evil spirits. The ceremony is also performed when unwanted subject enters the village. For example, when a wild chicken flies into a village, it is considered ominous. In this situation, the village headman and senior citizen discuss corrective and preventive measures, and schedule the day to perform the ceremony. It must be on any Tuesday of the year that too many people in the village get sick, for Tuesday is deemed a powerful day.

The village members help weave four flat baskets at the house of the ceremony performer. These baskets are to be hung side by side at the center of the ceremony performer's house courtyard. Materials are put inside a teak leave packet and put on those baskets. In the evening, the ceremony performer and elder citizen in the village chant to expel evils, sickness and bad things from the village. When they finish chanting, they spit into the baskets. Every ceremony attendant also spit on four baskets. Those who cannot participate spat on a cotton ball and ask family members who attend the ceremony to drop it on the baskets. After spitting is made, village representatives carry each basket to drop at each of four directions of the village. The ceremony performer and the elders sprinkle ashes immediately behind the representatives to prevent evils and sickness from coming into the village in the future.

3. New Year Day

A New Year day ceremony is held in January, after harvesting. It is held only once a year and is considered extremely significant for the Karen, as it is when married family members or those who left to work anywhere else return to the village.

For the New Year day ceremony, desserts are prepared to offer to the holy spirit the next day. Alcohol must be made for the ceremony and to share among villagers. The night before the New Year day, a religious leader called “Hi Hko” summons villagers for a ceremony. Each family sends a male family head with a bottle of alcohol to Hi Hko’s house. When everyone arrives, Hi Hko starts a rite by collecting every bottle of alcohol, praying and pouring alcohol from the bottle brought by the person who arrived first into a cup. Hi Hko sips it and passes along for every participant to take turn sipping from the cup. When everyone already sips and the cup is returned to Hi Hko, he pours remaining alcohol in the cup away and bless the family of the alcohol owner. Then another round begins, using alcohol from the second bottle to arrive. The ceremony carries on until alcohol from every bottled is sipped in the order of arrival. At large village, it can go on until the morning.

On New Year day morning, people wake up early to kill pigs and chicken for the ceremony. They put slaughtered animals and a bottle of alcohol in a bowl, then the elder family members conduct a rite, starting by hitting a bowl with a wooden stick to call personal protecting spirits of family members before tying a thread to the wrists of family members. While tying a thread, the elders bless the family members for health, happiness and absence of evil spirits in their lives. The family then have a feast together before visiting relatives for a meal and drink alcohol as a symbol to bless others. Everyone visits other families in the village. The most important day for Karen is the first day. The New Year celebration may last many days, depending on the agreement of citizen in each village. When the celebration is over, time to make a living for another year begins.

The aforementioned ceremony is how the Buddhist Karen celebrate new year. The Christian Karen hold similar ceremony, but they go to the church before having a feast. Then the village have an auction for belongings that each family brings before playing sport. There is a play in the evening as a form of entertainment. They do not drink alcohol on this day. The Christian Karen pray at night for seven nights before the celebration is considered finished.

1.5.7 Clothing

Karen in Thailand can be identified as two large groups and two small groups. The large groups are S'gaw and Poe, while Kaya (Bwe) and Taungthu (Pa-O) are the minority. Every group shares similar culture; however, each wears clothing unique to the tribe. Thus, clothing is a key to distinguish each group. Children and young women wear a sack dress made from white woven cotton, decorated by woven or needlework patterns. Married women wear a black or blue blouse and a red sarong decorated by job's tears seed or woven patterns. Men wear hip-length loose shirt decorated by colorful stripes. Men shirts are not lavishly decorated. They wear loose pants. Karen people usually wear bead necklaces with silver bracelets or earrings.

At present, only members of Poe and S'gaw groups routinely dress in traditional clothing. The Kaya and Taungthu people do not wear tribal clothing anymore. In addition to different clothing of different Karen groups, clothes of the same group living in different areas may not be the same. For instance, the Poe group living in Mae Sariang district, Mae Hong Son province dresses more colorful than the group in Chiang Mai. Female S'gaw at Mae Hong Son and Mae Cham district, Chiangmai decorate their dresses more refined and lavishly than the same group living in Tak province. The Poe group at Kanchanaburi decorates their clothes different from the Poe in the north. The Poe living in Chiangrai integrate modern pattern into their clothes, resulting novel products; for example, table cloth featuring Thai style patterns or a shawl showing Karen pattern. Despite the variation, the S'gaw and Poe groups living anywhere in Thailand maintain a characteristic identifying status of women; that is single women must wear a long white gown, and change to a black blouse and a sarong when they are married. Married women are not allowed to wear a long, white dress ever again. The Poe and the S'gaw men in the northern part of Thailand usually wear black, blue or navy blue pants, while those living in Tak province and Lee district, Lamphun province wear a sarong. Anyhow, young men in every group wear red shirt. The only difference is lavishness of patterns on the shirt. It is worth noting that the Karen wear new clothes for special ceremonies such as a New Year and a wedding. Both women and men dress especially nice for those occasions.



Figure 20 Karen's clothes

Source: Thong Thailand, **Karen**, accessed August 3, 2016, available from http://www.thongthailand.com/private_folder/aarrt5/lee66.jpg

1.5.8 Respecting spirits

The Karen have long believed in and respected spirits. They believe in spirits of their ancestors, guardian spirits of places, forests and mountains since they live in the forest on a mountain for a very long time. Unsurprisingly, nature binds into their beliefs.

Before conducting any activity, the Karen people always give an offering to spirits guarding the place and the ancestors, asking for protection as well as blessings for success, prosperity, peace and health. By giving offerings, the Karens ask for pardon from the spirits. These rituals are not only nice, but also create peace and unity of members of families and villages. The Karen highly regard their beliefs in spirits. Actually, it seems beliefs in spirits is not unique to the Karen. People in other parts of the world believe in spirits as well.



Figure 21 Karen's respecting spirits

Source: Northern Thailand River, **Salawin**, accessed August 3, 2016, available from <http://northern-thailand-river.com/wp-content/uploads/2012/05/salawin1-191.jpg>

1.6 Summary of Galayani Vadhana district

Galayani Vadhana district has rich historical background. The development of the district is caused by the interaction between the local Karen people and the area and community in many aspects; for instance, tradition and rituals for every month of the year, and the relationship between human and the forest from birth to death. One can say that Galayani Vadhana district is valuable. In addition, the initiative to rename the district from Baan Wat Chan to Galayani Vadhana has laid the foundation for development of the area and the community by integrating the forest, community and local wisdom as a platform to build on.

The expression of the community mainly bases on their culture and rituals. It is a challenge to develop the concepts and ideas continuously in order to attain the advancement that is based on local wisdom.

To push the country forward, it is crucial that core concepts of the specific area and community are genuinely comprehended, so that people from outside the area understand and accept the frame of thinking of people in the area. Perception about ethnic groups need to be changed. Previously, the ethnic groups were perceived as primitive and lacking civilization. Therefore, the concept of developing from local wisdom challenges traditional paradigm and knowledge in Thailand on how to choose a location for settlement, as well as way the way of living, culture and traditions.

The perspectives of the Karen people can be summarized in terms of the relationship between the environment and a community as follows:

1. The environment and nature determine the lives and well-being of people in the community.
2. Culture and rituals are guidelines on how to live and how to behave in order to live in that particular community and environment.
3. The perception and decision on what to do define behaviors of an individual or a group of people living in the community.

2. Theories employed for the research

This study employs globally-accepted theories that correspond to objectives of the project. The researcher found that to achieve optimal effectiveness of the selected theories, it is necessary to identify the characteristics and purposes of each theory before applying.

2.1 Grounded theory

Grounded theory evolved from a concept suggesting that a theory shall emerge from a study, based on field-collected data, rather than from research literature.

Glaser (1967) indicated that Grounded theory study is the study of a phenomenon from the outlook and interpretation of the observer. The researcher then applies the information to generate concepts, and identifies linkage between various concepts to devise a theoretical framework that explains the phenomenon and allows the researcher to understand it.

Charmaz (2000) cited Strauss and Corbin (1998) that the meaning of a theory according to this methodology comprises possible connection between concepts or a category of concepts. A theory generated using this method is a middle range theory, which is applied to explain a phenomenon in limited scope.

Leedy and Ormrod (2001) suggested that Grounded theory is a theory derived from a study of social phenomenon. A peculiar characteristic of this theory is it was developed from data that best reflect the phenomenon. The Grounded theory is discovered, developed and verified by systematically collecting and analyzing data. The devised theory comprises concepts about an actual phenomena that are linked and expressed as a proposal identifying linkage of concepts. This approach gives broad definition to a theory, covering concepts and a framework identifying a phenomenon that the researcher studies.

Napaporn Havanond et al. (2000) stated that the Grounded theory is a theory obtained from studying a social phenomenon. A theory is constructed and verified through systematic collection and analysis of data relating to a social phenomenon.

Pitak Siriwong (2004: 14) explained that the Grounded theory is a methodology in qualitative research approach. The Grounded theory proposes that to study and comprehend human behaviors and the coexistence of human, it is necessary to understand the process that an individual interpret subjects according to his perspectives.

Kanya Pothiwat et al. (2005) offered that a research to develop the Grounded theory is a qualitative research methodology which is different from other qualitative research approaches that normally begin from collecting data, progress to hypotheses and finalize with a theory that explains the studied phenomenon. The researcher needs to devise concepts, hypotheses and frameworks to explain the studied phenomena. Data collection and data analysis processes are performed simultaneously. To develop the Grounded theory, the data must provide details of the studied social phenomena in every aspect so they can be analyzed systematically. The theory attained from the process can explain a specific phenomenon. Therefore, a research to formulate the Grounded theory is a challenging process that is beneficial in developing new knowledge or expanding the existing knowledge.

The Grounded theory study is a systematic qualitative operation of collecting data, categorizing data and linking identified categories to present as a theory, which is a broad framework explaining events, activities, actions or interactions in the research subject.

A theory achieved from employing the Grounded theory is considered a process theory that explains the process of events, activities, actions or interactions. (Wirot Sanrattana, Doctorate of Education, Education Management, Mahamakut Buddhist University, 2013)

The Grounded theory applied to research includes three approaches as follows:

1. Strass and Corbin's systematic approach
2. Glaser's emerging approach
3. Charmaz's constructivist approach

The researcher had studied every approaches and found the one proposed by Strass and Corbin most appropriate to the project and the researcher. Strass and Corbin's systematic approach consists of 4 levels of data analysis

1. Open coding
2. Axial coding
3. Selective coding

Development of a logic paradigm or a visual picture of the theory generated

1. Open coding :

Data collected from various sources such as interviews, observation, record, journal and group discussion are categorized into meaningful groups. Generally, data are assigned into core categories and subcategories. At this stage, the researcher may categorize data into several core categories and subcategories. The subcategories may include attributes or characteristics. Open coding follows the inductive reasoning of qualitative research approach (from specific properties to general characteristics). Open coding process involves field work to gather raw data that will lead to other procedures in this sequence: raw data –

characteristics/indicators – code/concepts – categories. A theoretical proposal is derived if the researcher finds linkage between categories.

2. Axial coding

Axial coding is the process of selecting a category defined in the open coding stage to identify as core phenomenon of the process. Then specific connection of each group to a core phenomenon is identified. Other categories include causal conditions that affect the core phenomenon, strategies applied to the phenomenon, actions or interactions that are consequences of the phenomenon, conditions (contextual or intervening conditions) affecting the employment of strategies/actions/interactions, and consequences of the application of strategies/actions/interactions.

Finally, the researcher reaches the development of a logic paradigm or a visual picture of the theory generated, which is a logical relationship between causal conditions, a core phenomenon, contextual and intervening conditions, and consequences of the phenomenon. It is considered a theoretical model.

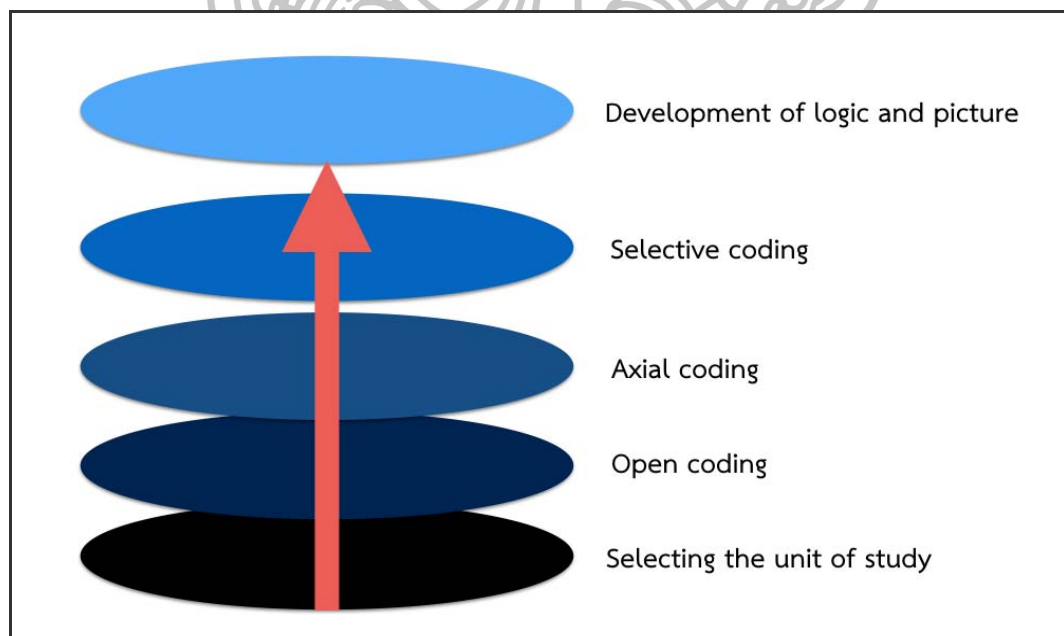


Figure 22 The diagram of grounded theory systematic

3. Selective coding and the development of a logic paradigm or a visual picture of the theory generated

Selective coding and development of a logic paradigm or a visual picture of the theory generated are two stages in which the theory is written from a logic paradigm or a visual picture of the generated theory, or from a logical paradigm between causal conditions, a core phenomenon, strategies/actions/reactions, contextual conditions, intervening conditions and consequences identified during the axial coding stage. The theory is built using story line technique to explain the process of research, referencing personal memos documented during the research as support information. The researcher must constantly review logical relationship between causal conditions, core phenomenon, strategies/actions/reactions, contextual conditions, intervening conditions and consequences. Following this process, the researcher shall achieve an explicit theory developed from logic paradigm or visual picture.

The aforementioned procedures can be determined as a research framework as follows:

1. Characteristics of a core phenomenon and causal conditions
2. Strategies/actions/interactions occurring from influences of a core phenomenon, contextual conditions and intervening conditions
3. Consequences of employing strategies/actions/reactions

2.2 Holism theory

Holism theory was proposed by J C Smuts. It means natural tendency to create the whole, which has more properties than the sum of its components. The Holism theory has only been adopted in research for about 50 years. The earlier approach, Reductionism, breaks a system into smaller elements to study it. Knowledge and understanding are gained from combining information on each element. Reductionism theory believes a subject can be dissected into parts that can later combined; whereas Holism considers a subject as an entirety consisting of various elements that perform different functions. The elements are inseparable as they are interrelated. Therefore, a subject having overlapping relationship is not a sum of

smaller elements, but is the totality of integration. “The whole is more than the sum of its parts” means the existence of each element is contingent upon the relationship of the whole. If the whole is divided, the entirety is immediately disrupted. To realize the truth about one element, the truth about other elements are also required. The reality is a result of interrelation of every element. The truth about one element is only a part of the whole. It does not represent other elements. Thus, the truth of a subject is the contribution of every element. The outcome of a whole is the synthesis achieved from the entirety of the system. It is an integration of every different part. Hence, the variety of components is crucial to the whole. Examples of the whole include an individual, a family, a community and a country.

Differences between Holism and Reductionism

The primary cause that put Holism theory and Reductionism in the exact opposite direction is the definition of the relationship between an individual and the truth.

Reductionism believes an individual can separate their subjectivity or feelings from objectivity. The truth that exists outside and beyond the individual's feelings is singular and universal.

Meanwhile, the truth can be dissected into components. By observing without objectivity, the truth about each component will emerge. The individual can see the absolute truth by aggregating truths from each component.

When the absolute truth is realized, an individual can control everything as wishes by applying knowledge and truth as controlling factor. For example, once the truth about one component is realized, an individual can manage such component. When the truth about every component is known, the whole can be managed.

Since the truth is complete, singular and universal, managing must be centralized to the person who have ultimate knowledge. This authority figure replaces those who have less knowledge in managing the truth. This person determines the rules and management process. Just like the truth, there is only single management method and it is universal. In short, it is a definite formula.

Unification as a social group occurs to increase management efficiency by dividing roles and responsibilities among group members. The other purpose is to collect the truth about each element and submit to the management center. The relationship between individuals is usually in a manner of reporting to the person who has more knowledge, rather than in hierarchical structure.

Furthermore, Reductionism approach perceives an individual as a singular, universal truth without subjectivity. The variation of identity is only contamination that clouds the truth; therefore, it must be deducted and destroyed, leaving only the unity of neutrality.

Holism approach believes the truth an individual knows is merely a part of the whole truth, meaning the acknowledged truth is incomplete. To discover the truth, an individual must rely on senses, which have limited capabilities; hence, the acquired truth is also limited.

The truth that an individual acknowledged is not only incomplete, but also inseparable from subjectivity of an individual. In other words, an individual cannot be unbiased since an individual is the source of truth. What we presume as an independent truth is actually an information about the truth acknowledged in the brain through senses in order to interpret and assemble into a virtual image.

Thus, an identity affects an image of truth we create; for example, experience, tradition, culture, environment, society and target. Every element that makes a person affects the truth that person perceives. When identity and objectivity of an individual change, truth changes too.

On the other hand, the truth cannot be dissected into parts. The existence of each part is contingent upon the relationship with the whole; therefore, dissection makes both the parts being separated and the whole, of which some parts were removed, immediately incomplete. For example, if Tom's arm is cut, the state of Tom as he was known is then incomplete, and the status of Tom's arm as being an arm is also incomplete.

Therefore, the knowledge achieved from Reductionism approach to study the subject is just the process to study incomplete parts. When knowledges

from incomplete parts are collaborated, the result is a mere incomplete image of the truth.

Attaining the information that is closest to the truth is crucial to living. That is why human beings need to contact with each other to select and collect incomplete truth from each individual and incorporate every piece of information into a whole that is as close to the truth as possible.

To cite Holism theory, the truth is what several individuals collaborate to create. The individuals who share similar objectivity create a set of truth that is different from other sets created by groups of individuals who share other similar objectivity. Thus, the truth is not singular, but plural and specific to groups or areas. It is not universal.

In addition, the truth achieved by collaboration of individuals change according to interaction of individuals. A mobile phone is a good example. The availability of mobile phone has changed the pattern of interaction. It is not considered terrible if a teenager is not punctual to an appointment with friends, as long as that person is reachable via mobile phone. For teenagers nowadays, being late is not serious, but not turning on the phone or let the battery run out is.

The main purpose of uniting as a group or society is to collect and select the information to collaboratively create the truth. The process of collaboration is secondary objective. Without the truth, the effort is worthless. Unification as a whole occurs naturally everywhere even in rural communities, including in Thailand.

In the past, people spent a minority of their time cultivating or earning a living. Most time is used to communicate and perform cultural activities in the community.

Diversity is necessity in the holistic society. More diversity means the truths the individuals collaboratively created are more complete. For this reason, a holistic society consists of overlapping diverse communities. Each community has freedom to define and manage according to their own truths. Freedom in communication between communities enables a complex network that facilitate reinforcement of the truth, resulting unity that is based on diversity.

Differences between Reductionism and Holism Theory

Table 2 The comparative of Differences between Reductionism and Holism Theory

	Reductionism	Holism
Individual	Unbiased	Biased
Truth	<ul style="list-style-type: none"> - Independent from an individual - Unchangeable - Complete - Singular - Universal 	<ul style="list-style-type: none"> - Created by collaboration of individuals - Changeable - Incomplete - Plural - Specific to group
Management	<ul style="list-style-type: none"> - Centralized - Fixed pattern - Planned and performed by authority figure 	<ul style="list-style-type: none"> - Cooperation - Diverse by situation - Planned and performed by self
Society	<ul style="list-style-type: none"> - Gather to work - Connect vertically, in pyramid pattern 	<ul style="list-style-type: none"> - Gather to communicate and exchange - Overlapping as a complex network
Unity	<ul style="list-style-type: none"> - Arisen from similarity 	<ul style="list-style-type: none"> - Arisen from differences

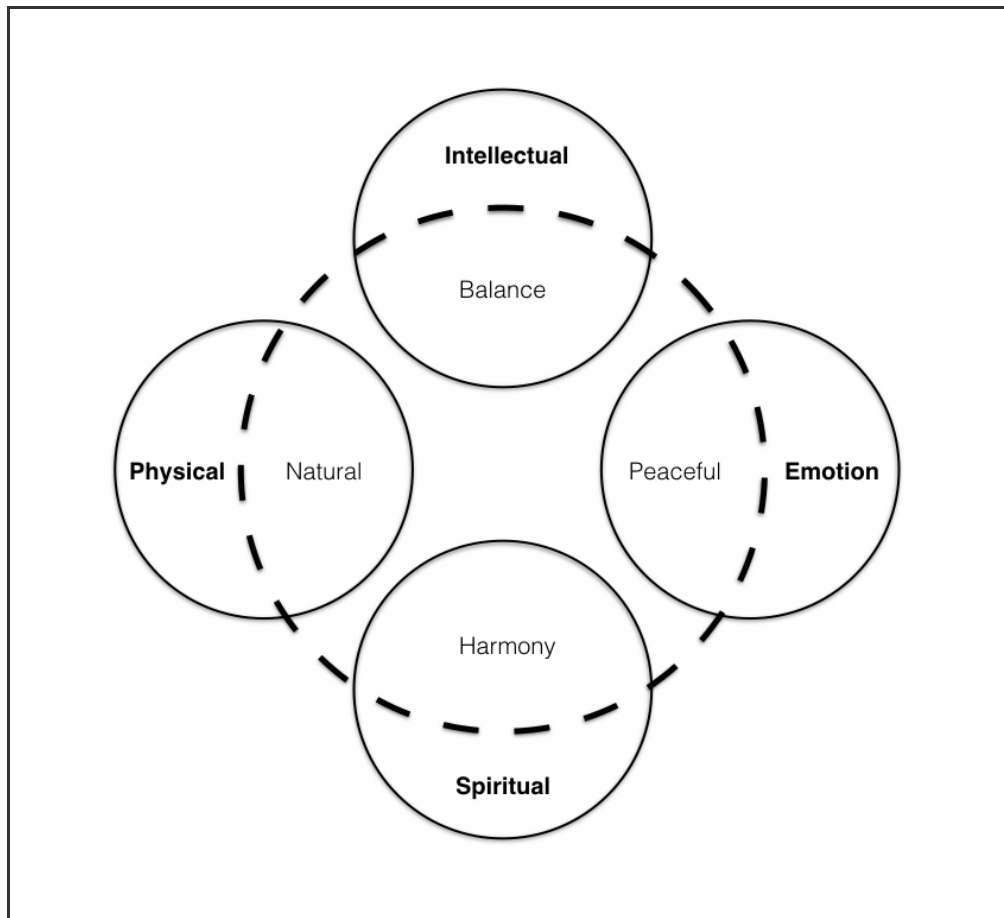


Figure 23 Galayani Vadhana in in the Holism theory viewpoint

2.3 Contextualism

Contextualism is a contemporary concept that offer approach to a study in multiple perspectives; for instance, exploring meaning, understanding, rationale, truth and rightness. Employment of this theory is subject to research design. It enables the researcher to find facts related to the environment in the research setting. Contextualism is a modern approach that is adopted by many fields of discipline as it allows the researcher to discover interesting aspects of the researched area that can be applied to other processes.

Contextualism emphasizes on systematic questioning using the following questions:

1. What? – This question is used to inspect the meaning of the element in each definition and the research framework.

2. Where? – By defining the boundary of the location or area where the study is conducted, including its size, components in the location from past, present and future as well as effects in various aspects, the researcher can have clearer outlook on the area.

3. When? - By associating time with location, movement of matters in the context becomes more apparent. The connection between cause and effect of the period of time, and the restriction of time or natural system can be identified using “when” question.

4. Why? - This question might be the most important one. It can disclose the relationship of answers to the what, where and when questions so the core element of the context being studied reveals.

5. How? – The researcher needs to question the discovered core element to work on it in later stage. The analysis process should be reviewed since the first procedure whether any step should be rectified.

The researcher must maintain neutrality and openness if the Contextualism approach is employed, as the contextual systems vary broadly. Some information may cause the study to be incomplete. Contextualism includes both internal and external context. Research results vary by the width and depth of the scope of study. Defining precise scope facilitates richer process of finding answers to the questions.

The relationship between research objectives and results must be determined. The criteria for relationship identification can be anything from quality of the information to tangible or intangible factors.

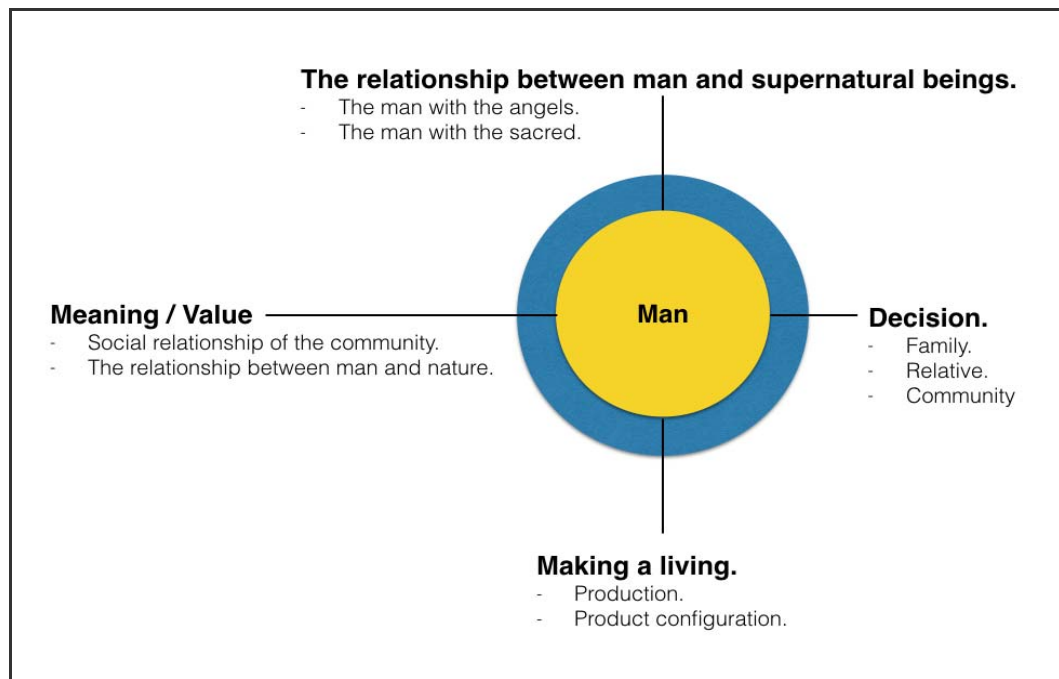


Figure 24 The diagram of Galayani Vadhana district in the Contextualism approach

2.4 Postmodernism

The Postmodernism theory has a possibility to become a primary approach for every field due to its principle in strongly emphasizes on truth and present. This attribute corresponds with communication in digital age. In addition, after the globalization movement, liberalism as well as development and diversity bring new interpretation to every society. Holistic thinking emerges from disagreement with domination over ideas or the application of only one methodology. Researchers should employ critique methodology and more diverse approaches for analysis. The word “Postmodernism” was introduced by Jean-François Lyotard, a French philosopher, in his book published in 1979 named “The Postmodern Condition: A Report on Knowledge”. He suggested that the postmodernism movement began in the 1950s, when Europe began to shift and reconstruct paradigm about human, society and culture. Lyotard called for humankind to reject metanarratives and theories that claimed western civilization is universal. The movement was an effort to understand the fundamental of

philosophies, starting by analyzing philosophical theories that claimed to explain the truth. Lyotard explained what he call “Postmodernism” as follows:

“I define postmodern as incredulity toward metanarratives. This incredulity is undoubtedly a product of progress in the sciences: but that progress in turn presupposes it. T the obsolescence of the metanarratives apparatus of legitimation corresponds, most notably, the crisis of metaphysical philosophy and of the university institution which in the past relied on it. The narrative function is losing its functors...What, then, is the postmodern?...It is undoubtedly a part of the modern....A work can become modern only if it is first postmodern. Postmodernism thus understood is not modernism at its end but in the nascent state, and this state is constant....The postmodern would be that which, in the modern, puts forward the unrepresentable in presentation itself.” (Lyotard, 1984: 79-81)

Postmodernism rejects a paradigm commonly accepted during Modernism period. It emphasizes on liberty and freedom of the individual. This theory denies the ideas of absolute truth and universal, asserting that each individual or culture has own reasons; thus, no one should think what is best for that person is best for others. For this reason, a universal society does not exist. Postmodernism movement inspires new style of design, a mixture of classic and modern eras. Architectural designs in postmodern movement period use clean, eye-catching lines and shapes, yet feature classical details or tone as well. It is a period of an attempt to create and uphold equality.

Postmodern design concept:

1. Postmodern design rejects the idea of being central. In other words, authoritative power is not accepted. The approach focuses on fringe to release from the remnant of domination of time, space and identity aspects as appears in many contemporary works.

2. Postmodernism denies wholeness. Therefore, paintings, designs and architecture do not have to portray the whole picture. The works may feature several overlaying stories, or raise series of questions.

3. Postmodernism approach objects to structure, regulation and order. As a post-structuralism, design adopting postmodernism does not adhere to

structure. The designer has freedom to define the starting and the ending points of the work, or even leave it open to encourage questions.

4. Since Postmodernism rejects the beginning, the approach ignores history. However, there is a hint of nostalgia due to instability of the identity. The past is not history. The purpose is to destroy history since it is integrated in present, or completely unrelated to the context. Postmodernism aims to critique and question western society, which is not a Utopia that bring happiness, freedom or rationality as claimed. Such image is only a discourse used to lure other societies to take advantages of them.

Postmodern design does not consider only on the aesthetic value, but the work must be developed based on research or design in parallel with research as the paradigm has been shifted. The other element regarded in Postmodern design is process, which is considered a compass that guides the direction and scope of design.

The outcome of design in Postmodernism movement may amaze or puzzle some people. The perception of Postmodern design depends on understanding and outlook on the context as well as fundamental knowledge. As the process of Postmodern design is flexible and contingent upon perspectives, attitude and vision of the researcher or main designer, often time the works are accepted in small circle or even rejected by the public.

Notable technics in Postmodernism design:

1. The acknowledgement of differences in various dimensions, and cautious selection to handle them
2. The newness of idea synthesis to reflect the holism view
3. The humbleness in sociology outlook that emerges from the respect of the subject of research
4. The reflection of the process of analysis, development and interesting way of thinking

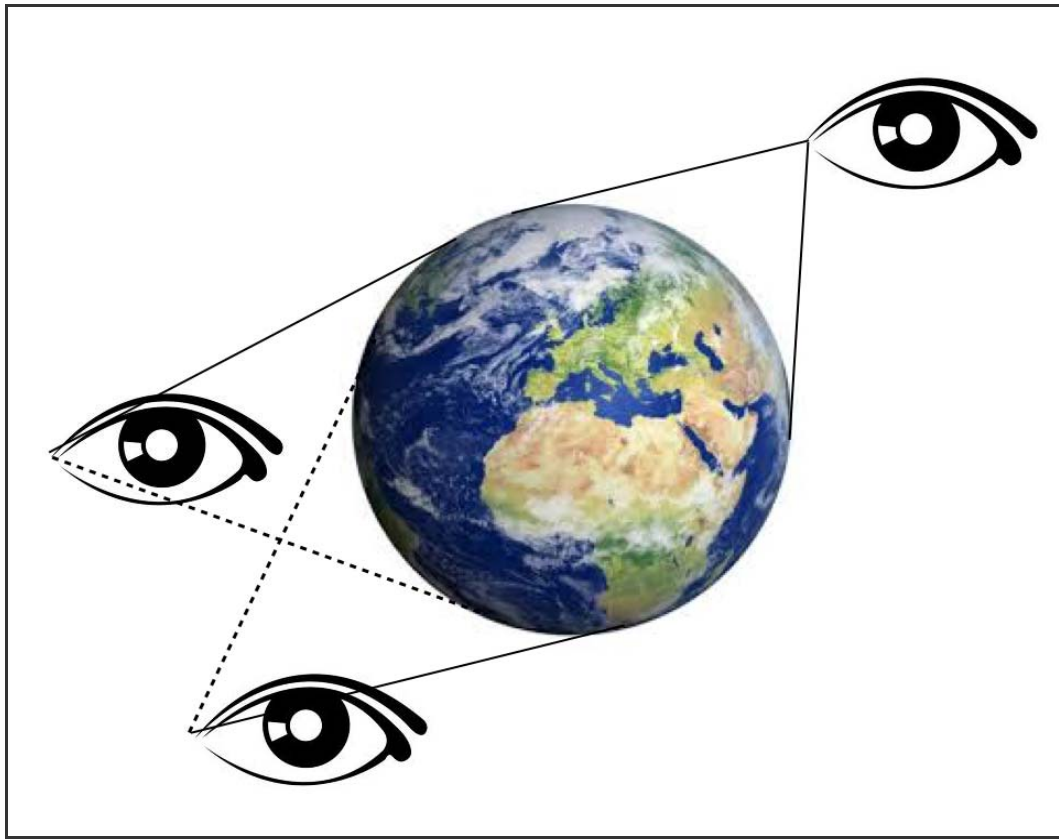


Figure 25 Different viewpoint making differential approach

Summary of theory:

From the main theory above, the view that the combination of concept and build process. To the essence function of each theory.

To make the analysis and possible sharp meanings. Should see that The sequence of each theory. The result. The more interesting. The ranking function as follows.

The first is to understand the "truth" of the area by using the process. And procedures in the education both from documents, photos. The area to survey, it was found that the researcher has deep understanding in every aspect, such as the physical appearance of the area within the district. The way of living of the people. The relationship of life the people, plants, animals, including the belief, culture, tradition and the grouped data. To be useful in the study of preparation and design work.

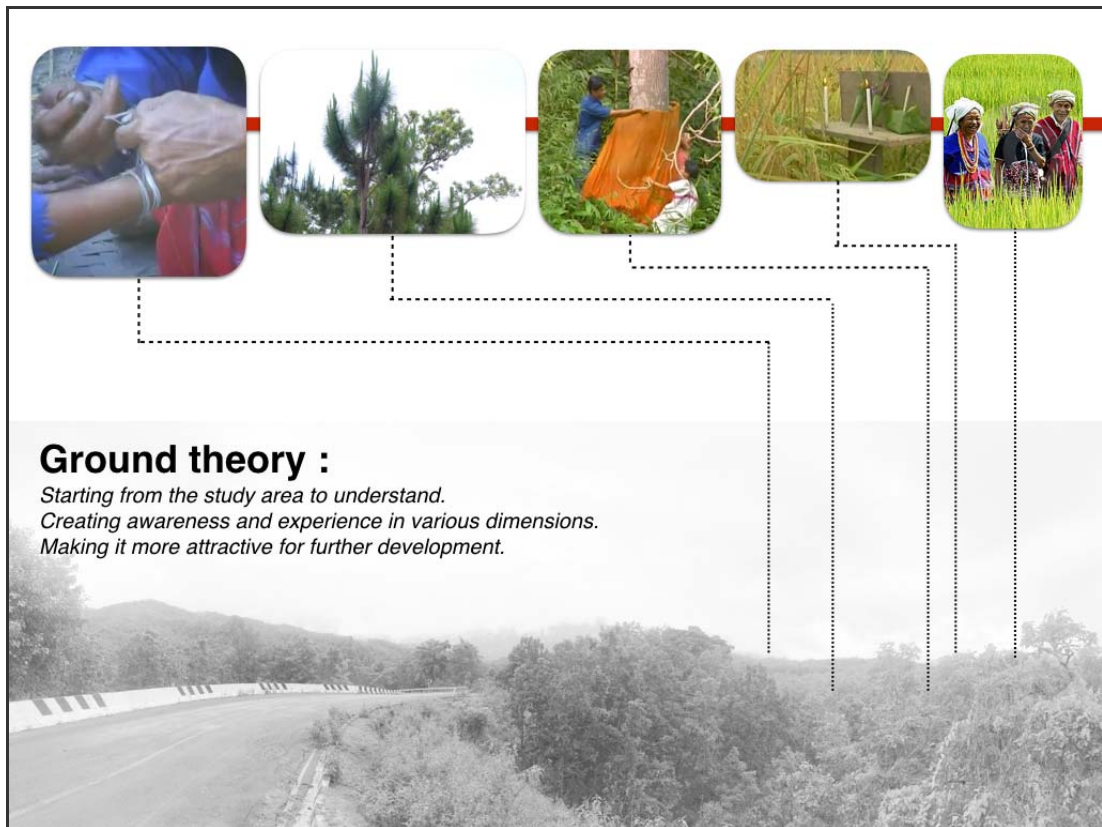


Figure 26 The diagram of Galayani Vadhana district in grounded theory approach

Next, after understanding the core or issues that come. Is to analyse the relationship of the characteristics of the various aspects that cause effects or variables in the study. To view the relationships in a holistic way, then. To look with neutral thoughts. Do not put their attitude, which may cause the data deviate. The study in the area to see the relationship in a variety of dimensions as follows.

1. social relationships such as family relationships, relationships in kinship relationships in collaboration by functions.

2. Relationship of live. The Karen is based on the basic is the housing, medicine, food, and clothing.

3. Relationship emotional beliefs that the way their existence in line. The traditional proper cause happiness of life.

In a relationship with all of the above, it can be seen that the relationship of the three it is a relationship that cannot be separated from it and causing it to in-depth study.

In terms of the question the reason of different things, until as a result, it contributes nothing to the community or culture. The following tribal traditions.

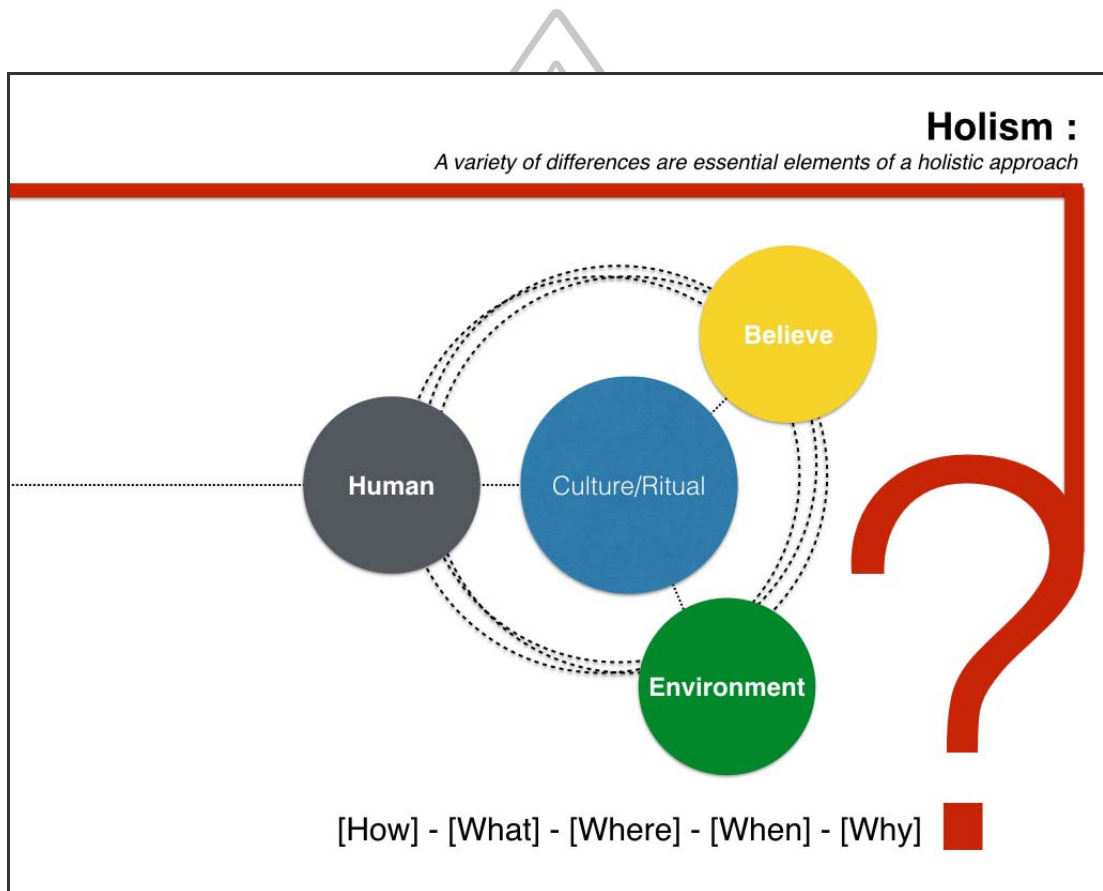


Figure 27 The diagram of Galayani Vadhana district in holism approach

Next is the study in the system of the context, causing "characteristics" of the area will see that Karen system of culture, tradition that cause. "Ritual" attitude, belief, as the practice to create the coexistence of people and environment, nature and faith together.

Context, causing the bond of faith and life, monopoly of "time" and "ritual", causing the dynamics within the community is the plot. Terrain and

environment causing the style of "tangible" beliefs and the effect of the faith itself. It is for the livelihood of the Karen as unique.

The personality of the culture. Ritual of the people in the area is in the respect and humility of on the surrounding. Because the heart or the philosophy of Karen anymore. The life of the Karen with forest and nature. As one born till the end of life.

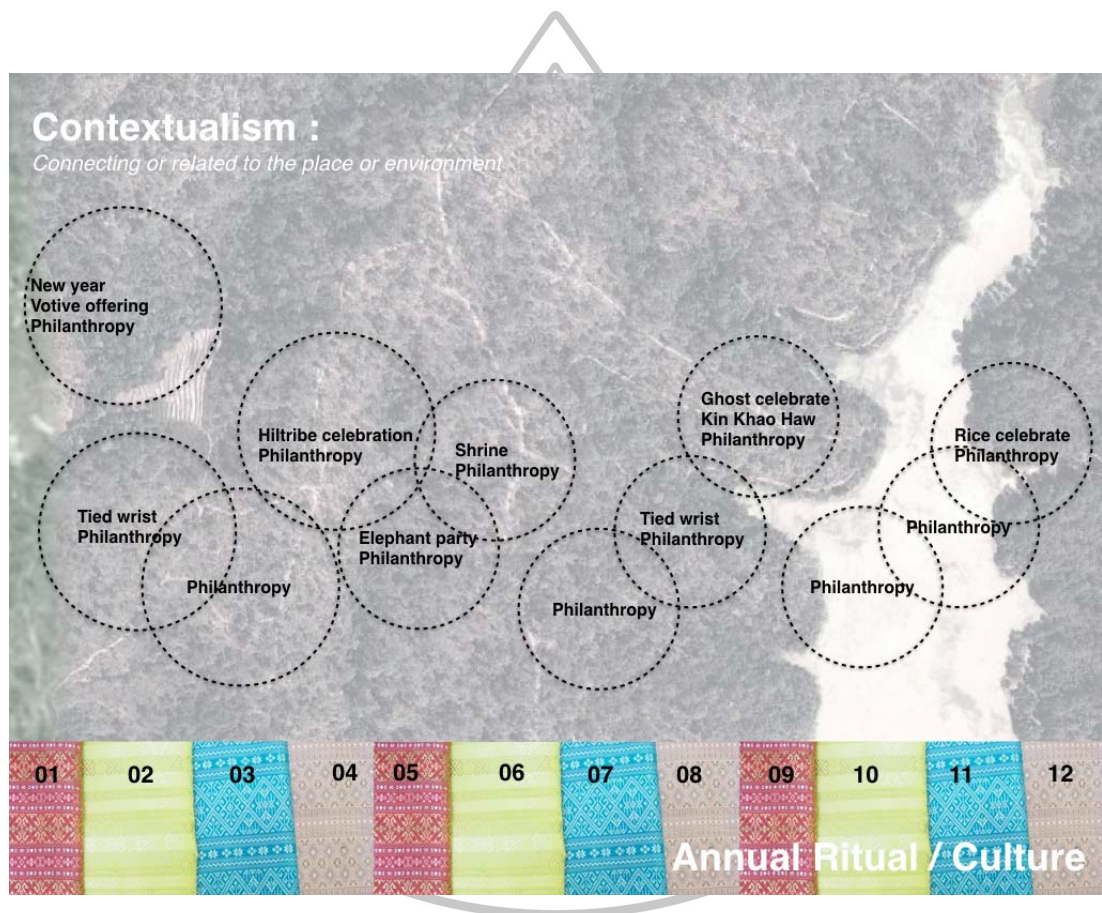


Figure 28 The diagram of Galayani Vadhana district in contextualism approach

And finally the design through the perspective of post modern nature of post modern is creating a new perspective from personal experience. From this research, the researcher has inserted a concept in the analysis and give birth every step of the way, such as, after interviewing people in the community. Will a person asked back to reflect his thoughts. Observation system of the community through the season.

A post modern philosophy I don't think there is only one truth, but that "truth" is looking at several views. And should combine multiple views. Together the true philosophy and post modern deny the power of a frame structure model from regulation and original. , and seek to think outside the box and innovate all the time.

The importance of the way of thinking of creative to achieve more differences in analysis of the truth. Creation and the choice of new information occurs.

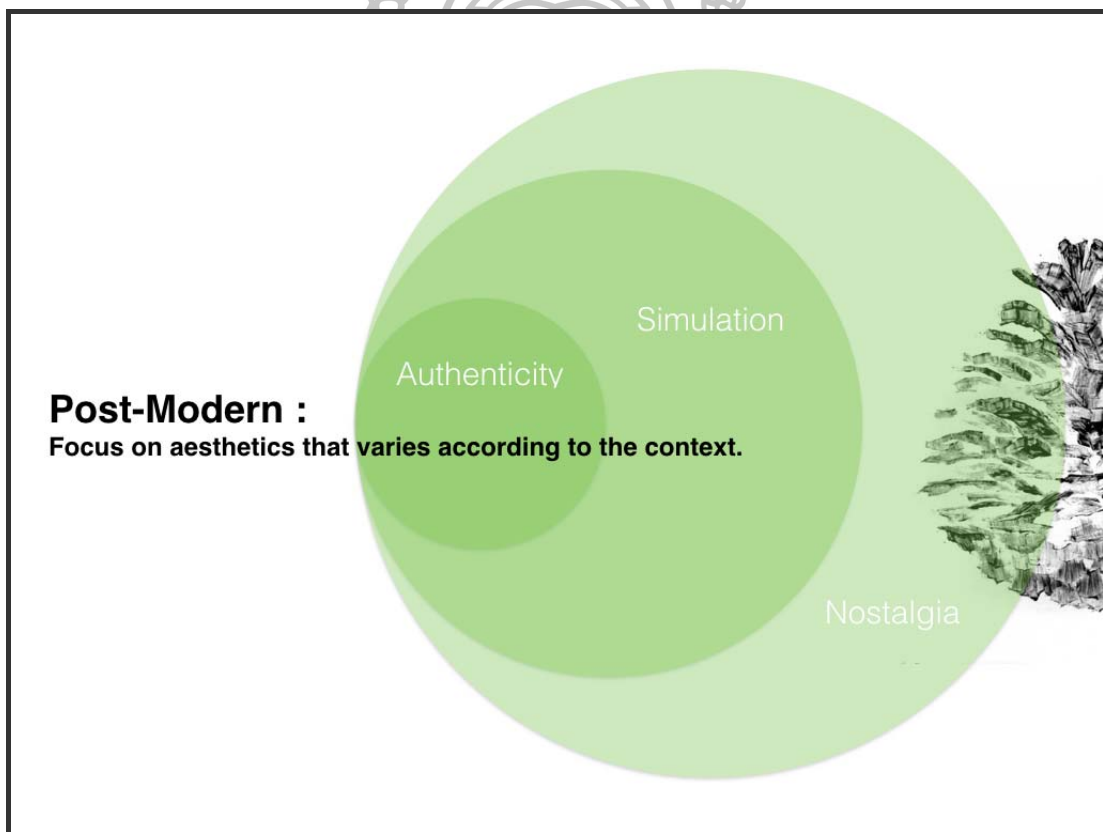


Figure 29 The diagram of Galayani Vadhana district in post-modern approach

Attractive design that seems to occur. Particularly in cultural study. Creative review, thinking back to the past by creating scenarios to create the experiences of people in the modern era. "identity" or "truth" will make the design so there is a story beyond beauty and inspiration only...

3. Case study

The case study on spatial characteristics design involves review of the structure and products from several countries to explore the concepts and ideas behind the works.

The criteria in choosing the cases support the research framework, i.e.

1. The work is inspired by nature or natural composition.
2. The work can represent the location it is situated in.

There are many pieces of work featuring organic inspiration that create spatial characteristics. The purposes of creating this type of work are as follows:

1. To create an image of the location
2. To be a symbol
3. To make tourists memorize the place

Attributes of iconic design

1. Notable shape
2. Connotation

Case 1: Burj Khalifa, United Arab Emirates

General information

Burj Khalifa is a skyscraper that has been officially opened. Construction was finished on December 2, 2009. It is a part of a large-scale development, located at the “First Interchange” along Sheikh Zayed Road and Doha Road. Burj Khalif was designed by Adrian Smith at SOM. George J. Efstathiou of SOM was a project manager and Bill Baker was a structural engineer. CBM Engineer was awarded to perform a third party peer review. The skyscraper is 828 meters high. On July 22, 2007, Burj Khalifa became the tallest structure in the world, surpassing the former record holder, Teipei 101, by 546 meters.

Geography

United Arab Emirates (UAE) is a Middle Eastern country. The north of UAE reaches Qatar and the Gulf of Persia. Oman and the Gulf of Oman border the east. The south is flanked by Oman and Saudi Arabia. The west of UAE is adjacent to Saudi Arabia. Approximately 80 percent of the country is a desert. The shore that runs from the north to the east of the country is 1,318 kilometers long.



Figure 30 Map of United Arab Emirates

Source: Worldatlas, **The united arab emirates capital abu dhabi**, accessed August 3, 2016, available from <http://www.worldatlas.com/img/capitals/the-united-arab-emirates-capital-abu-dhabi.jpg>

Organic inspiration

The design of Burj Khalifa was inspired by a desert flower in the genus *Hymenocallis*. Structure of the flower was an inspiration for the architect to develop optimal stability for the structure.



Figure 31 Hymenocallis

Source: Pacific bulb society, **Hymenocallis**, accessed August 3, 2016, available from http://www.pacificbulbsociety.org/pbswiki/files/Hymenocallis/Hymenocallis_eucharidifolia_LP.jpg

From the analysis on the strength of this breed structure, flower, it was found that the axis of the flowers have a strong enough to get the petals with very long. Which was developed by using knowledge inspiration biology, mathematics, which reflects the mission integration in building concept not stick with something to show.

Design of a high-rise building. Must have building form to lessen resistance force of nature as well. The lateral force or the wind.

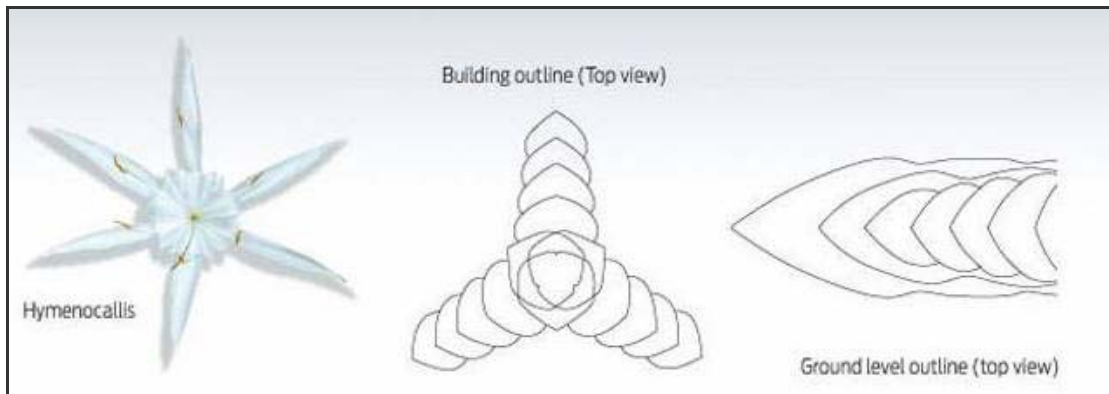


Figure 32 The development of shape and form

Source: CDN Home Design, **Burj Dubai Design**, accessed August 3, 2016, available from <http://cdn.home-designing.com/wp-content/uploads/2010/01/burj-dubai-design.jpg>

From figure 31. will see the shape, by developing the idea straightforward. Enables communications to better ideas source



Figure 33 Attenuation of the shape

Source: **Maxresdefault**, accessed August 3, 2016, available from <https://i.ytimg.com/vi/cn7AFhVEI5o/maxresdefault.jpg>

Design

The architect of the world's tallest skyscraper took an inspiration from the Hymenocallis desert flower to design the structure of the building in Y-shape, making it extremely stable.

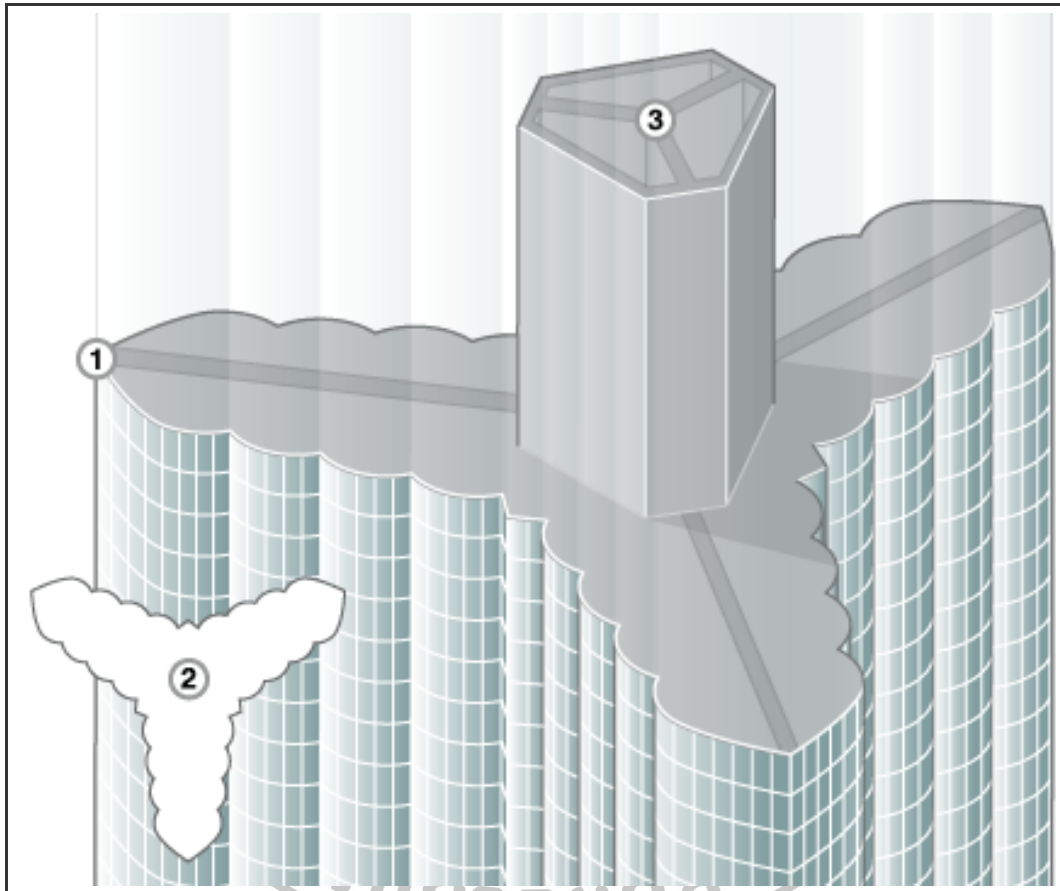


Figure 34 Y Shape Design

The building is a symbol of the shape and make easily recognisable, but also the latent with details such as the culture is a concept. Culture, blend in the design. As the Islamic architecture and with the flowers. The filing out of the center building.

Perception

The contrast between soaring height of Burj Khalifa and the horizontally expand desert it sits on makes the structure spectacular. Setbacks not only serve aesthetic purpose, but also reinforce stability of the building.

The architect adapted the triangle shape of the Hymenocallis petals in his design. This corresponds with fundamental concept on shapes stating that triangle is the most stable shape. The wings and setbacks at the lower levels create the impression of stability. A cluster of towers makes a central core. As the structure reaches toward the sky, setbacks are introduced to prevent from looking too high.



Figure 35 Burj Khalifa with a symbol of the country

Source: Thai buffer, **BurjKhalifa nodff**, accessed August 3, 2016, available from http://wm.thaibuffer.com/o/u/pirawan/Travel2/BurjKhalifa_nodff.jpg

From the Kevin Lynch's figure-ground perspective, the pleasant sight of Burj Khalifa soaring to the sky creates the image of prosperity and progress of the country.

To create a memorable impression to the people at present. Apply design with violence. To stimulate interest and excitement, but on the other hand, As a symbol of prosperity and wealth of the country did not make creative or treat language design, with the appearance of the Muslim clearly. The use of a different nation designer. Cause design with universal quite high.

Case 2: Opera House, Australia

General information

One of the modern architectural wonders is the world-renown Sydney Opera House. The Australian government had it constructed with the intention to draw attention of people. Recognized architects around the world were invited to participate in an international design competition. The winner was a Danish architect Jørn Utzon who was not yet famous at that time. His design was merely a simple sketch, but he won the competition as the majority of the judge liked its concept.



Figure 36 Sydney OperaHouse

Source: Holiday Thai, **Sydney OperaHouse**, accessed August 3, 2016, available from <http://www.holidaythai.com/images/attraction/opera-house-sydney.jpg>

The shell-shaped architecture required advanced construction technology and huge investment as Utzon did not calculate his design thoroughly. Construction took nine years despite advanced technology and state-of-the-art equipment. The Sydney Opera House was finished in 1973, and Jørn Utzon has been known as a world-class architect since then.

The Sydney Opera House faces Harbour Bridge at Sydney Harbor, Sydney, New South Wales in Australia. It was listed as a World Heritage on June 27, 2007 though it was built recently, unlike most other historic sites. UNESCO recognized it as a World Heritage because “Sydney Opera House is a great architectural work of the 20th century. It represents multiple strands of creativity, both in architectural form and structural design, a great urban sculpture carefully set in a remarkable waterscape and a world famous iconic building.” The Opera House has had influenced on architecture for a long time.

Geography

Australia covers 7,617,930 square kilometers (2,941,300 square miles). It is located on the Indo-Australia plate, surrounded by the Indian and Pacific oceans. Australia is separated from Asia by the Arafura and Timor seas, with the Coral Sea reef lying off the Queensland coast and the Tasman Sea lying between Australia and New Zealand. It is the world’s smallest continent and the sixth largest country by area. Due to its size and isolation, Australia is often dubbed “the island continent”. Sometimes it is considered the largest island in the world. Australia has 34,218 kilometers (21,262 miles) coast, excluding all offshore islands. It claims an exclusive economic zone of 8,148,250 square kilometers (3,146,060 square miles). This economic zone excludes Australian Antarctica Territory and Macquarie Island. Australia is located between latitudes 99° and 44°S, and longitudes 112° and 154°E.



Figure 37 Location of Sydney OperaHouse

Source: **Sydney OperaHouse Map Location**, accessed August 3, 2016, available from <https://traveltipsandpictures.files.wordpress.com/2013/10/sydney-opera-house-map-location.jpg>

Australia's size makes its landscapes diverse. It has a tropical rainforest in the northeast, mountains in southeast, southwest and east with dry desert in the center. It is a flat continent that has the oldest and least fertile soil. The largest portion of the land in Australia is a desert or semi-arid land. The area is commonly known as the outback. It is the driest inhabited continent. Only the southeast and southwest of the country is cold. The population density is 2.8 inhabitants per square kilometers, among the lowest in the world. Most of the population lives along the temperate southeastern coast.

The climate of Australia is significantly influenced by ocean currents, including the Indian Ocean Dipole and the El Niño–Southern Oscillation. The currents correlate with season drought and the seasonal tropical low-pressure system that initiates cyclones in northern Australia. These factors cause rainfall to vary from year to year. Much area in the northern part of the country has tropical climate,

predominantly summer rainfall (monsoon) climate. The southwest corner of the country has a Mediterranean climate. Most of the southwest, including Tasmania, enjoy a temperate climate.

Organic inspiration

The combination of land. Blue sheet and water as one shell roof floor leading from the hole concept sphere in comparison to Earth. Comes with the hemisphere and degrees is the same latitude and longitude coordinates have curved roofs. Pre-cast concrete rib construction covered with a white coating sheet. When it reflects sunlight, it will disappear into the clouds, resembling a sailboat, which reflected light will change throughout the day.



Figure 38 Roof concept of Sydney Opera House

Design

Design of the Sydney Opera House employed the deconstruction theory to make space interesting and serve its function. Interior elements that facilitate activities were addressed. The figure-ground technic was applied to the landscape, which is at a scenic bay. The panorama impresses everyone spectators.

Using the concept of building a level playing Mayan. The use of raised floor height traditional Nordic. And a floating roof on a stone base, Chinese and Japanese. To create a unique building, prominent among which is the context that extends out into the bay. And a clear expression of reinforced concrete structures.

Perception

The overlaying roof structure and smooth texture reflect that the designer understands absolute truth of nature. The location that is on a cape at the bay creates the existence of manmade structure in natural space. The Opera House brings nature such as sunlight into the building through overlaying glass panels, creating movement of nature within internal space. The effort to create spatial characteristics of the Sydney Harbor was successful in the researcher's point of view as it still create memory of the location or a community despite having been at the harbor for 43 years already.

Case 3: Waipapa Marae – Maori Meeting Grounds, New Zealand

General information

The Waipapa Marae (Maori Meeting Grounds) is located within the vicinity of University of Auckland. It represents the Maori people suitably. The building serves as a center of the community, wisdom, beliefs, rituals and traditional art form.



Figure 39 Maori Meeting Grounds

Source: **Maori Meeting Grounds**, accessed August 3, 2016, available from http://farm1.nzstatic.com/_proxy/imageproxy_1y/serve/gathering-at-a-marae.jpg?outputformat=jpg&quality=80&source=1379272&transformationsystem=letterbox&width=940&securitytoken=C44DF39C019EAF6E907027B25EB8D844

Geography

New Zealand consists of two main islands and many small islands. The country is located in the middle of the water hemisphere. The two main islands (the North Island and the South Island) are separated by the Cook Strait, which is 20 kilometers wide. New Zealand has water sources across the country. It ranks seventh as country with water area. Its Exclusive Economic Zone covers 4 million square kilometers.

Much area of New Zealand has temperate climate. The country boasts cultural diversity and natural attractions. New Zealand has temperate climate throughout the year. The weather is mild in summer and winter is not freezing. The west wind brings rain to New Zealand all year.



Figure 40 New Zealand environment

Source: National Geographic Expeditions, **Itinerary header**, accessed August 3, 2016, available from <http://www.nationalgeographicexpeditions.com/assets/images/1872/itinerary-header.jpg>

Organic inspiration

The Maori people take inspiration from their wisdom, beliefs and nature when they design. Such organic inspiration can be observed from buildings, houses, tools, and from body tattoo, which has become an image of the Maoris.

Design

Inside the Waipapa Marae, the architect turned intangible subject into tangible objects. For example, the pillars in the middle of the Marae symbolize communication between the earth and God. The roof and ceiling are a metaphor of sky. The skylight represents the Maoris' belief about day and night. The carved bas reliefs used both inside and outside the building vigorously portray tribal beliefs.

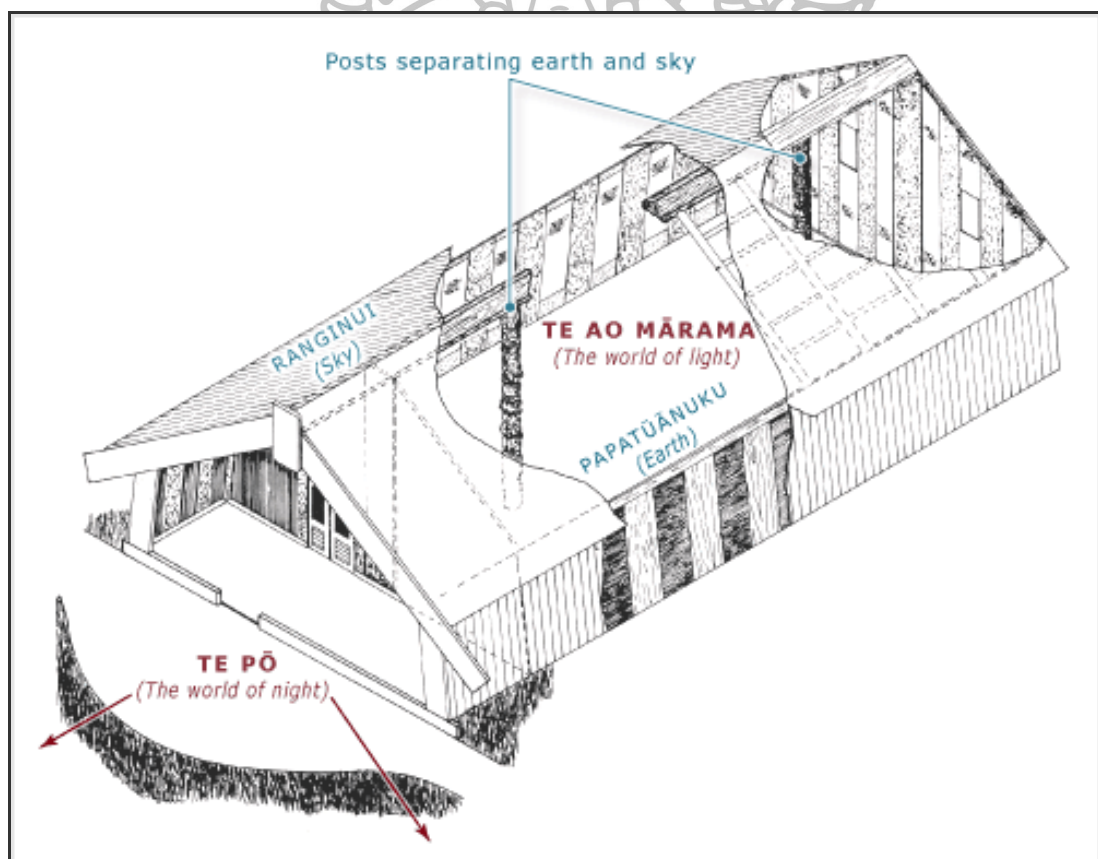


Figure 41 The metaphor concept of Maori Meeting Grounds

Source: **Te Ara**, accessed August 3, 2016, available from <http://www.teara.govt.nz/files/41366-enz.gif>

Perception

The style and pattern of the building reflect the way of living, wisdom and belief of the Maori tribes. The Maori's art features in the simple building create aesthetic uniqueness. The use of tribal wisdom and beliefs in composition create a clear signature design.

Michel Foucalut stated that a combination of symbols creates understanding about a particular subject, which affect identification of what is knowledge and truth. The carved installations at the Waipapa Marae portray energy and beliefs, filling the building with fascination and power.

Case 4: Jean-Marie Tjibaou Cultural Centre, New Caledonia

General information

The Jean-Marie Tjibaou Cultural Centre was designed by Italian architect Renzo Piano. The center features New Caledonia's culture. There are 10 pavilions of different dimensions and functions.



Figure 42 Jean-Marie Tjibaou Cultural Centre

Source: Renzo Piano Building workshop, **Jean-Marie Tjibaou Cultural Centre** accessed August 3, 2016, available from <http://www.rpbw.com/files/6710fcb226f9933f651a118eaf4ccb3a976127f.jpg>

Geography

New Caledonia is an archipelago, lying amidst the emerald water of the Pacific Ocean. It is a special collectivity of France; thus, sometimes it is referred to as the largest lagoon in the world. It is the most plentiful habitat of indigenous plants in the Pacific region, and is one of the lushest rainforest in the world. The archipelago features diverse landscape as a result of continent shift. Each area of the country is unique. The east coast has tropical climate so it is covered with vegetation. The west coast is dry and has large savannahs.

Organic inspiration

The center incorporates the way of life, nature and the environment smoothly. The shape of the buildings reflects a traditional house of the natives in harmony with the surrounding.



Figure 43 The tradition architecture and new design alongside together

Source: World all Details, **Jean-Marie Tjibaou Cultural Centre**, accessed August 3, 2016, available from http://www.worldalldetails.com/article_image/1300870472-uckiht8v.jpg

Design

The project incorporated technology, culture and nature. Local architecture was subtly applied to coexist with the surrounding rather than to be prominent. The shape of the building was an outcome of geographical analysis. Since the center is close to the lagoon, it is windy. Thus the structure needs to withstand the wind and conserve the energy. The pavilions' shell correspond to the direction of the sun, wind and rain.

Modernism and Postmodernism theories were deconstructed to create uniqueness. The architect used a plethora of lines to make strong outer ribs that create the impression of being light and airy.



Figure 44 The design that respects local knowledge

Source: **Jean-Marie Tjibaou Cultural Centre**, accessed August 3, 2016, available from http://payload100.cargocollective.com/1/9/297065/4318647/0_905.png

Perception

The complex and its landscape are the charm of this project. The effect of using wood pattern as outer wall is the buildings look light comparing to the design and actual size. Shape of the pavilions complement the beach and direction of the wind. Every aspect portray the coexistence of design and the environment.

Shape of the indigenous people's hut that was applied to design the buildings illustrates application of form in design. The choice of materials has an impact too. The use of wood symbolizes living with nature.

Case 5: Ceramic Museum and Mosaic Park, China

General information

The Ceramic Museum and Mosaic Park is in the Jinzhou World Landscape Art Exposition of 2013 at Jinzhou, China. China has been growing continuously, and has expanded their trade and tourism. This new project was built in a park featuring suave, eye-catching shapes. It was designed by Casanova + Hernandez Architects from The Netherlands under the concept the combination of past cultural nature and the presence of globalization.

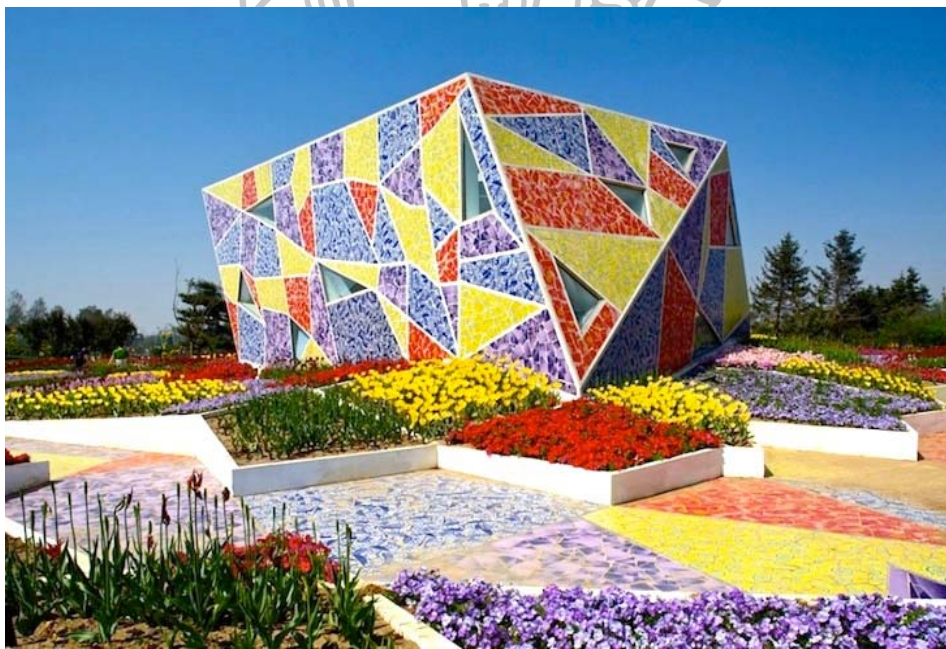


Figure 45 Ceramic Museum

Source: **Ceramic Museum and Mosaic Park by Casanova Hernandez**, accessed August 3, 2016, available from <http://assets.inhabitat.com/wp-content/blogs.dir/1/files/2013/11/Ceramic-Museum-and-Mosaic-Park-by-Casanova--Hernandez-131.jpg>

Visitors may not know that in the past century, Jinzhou produced amazingly beautiful ceramics. Nevertheless, the mosaics at the park become a part of their good memories.

Geography

Jinzhou is a town at the size of 1,074.6 square kilometers, located 20 kilometers northeast of the center of Dalian city. The town is bordered by Pulandian in the north, Ganjingzi to the south, Yellow Sea to the east and Bohai Sea to the west. The highest point of the town is Mount Dahei, soaring 662 meters above the sea level.

During winter, the Yellow Sea side of town has mild temperature but the Bohai sea side is extremely cold in January and February.

Organic inspiration

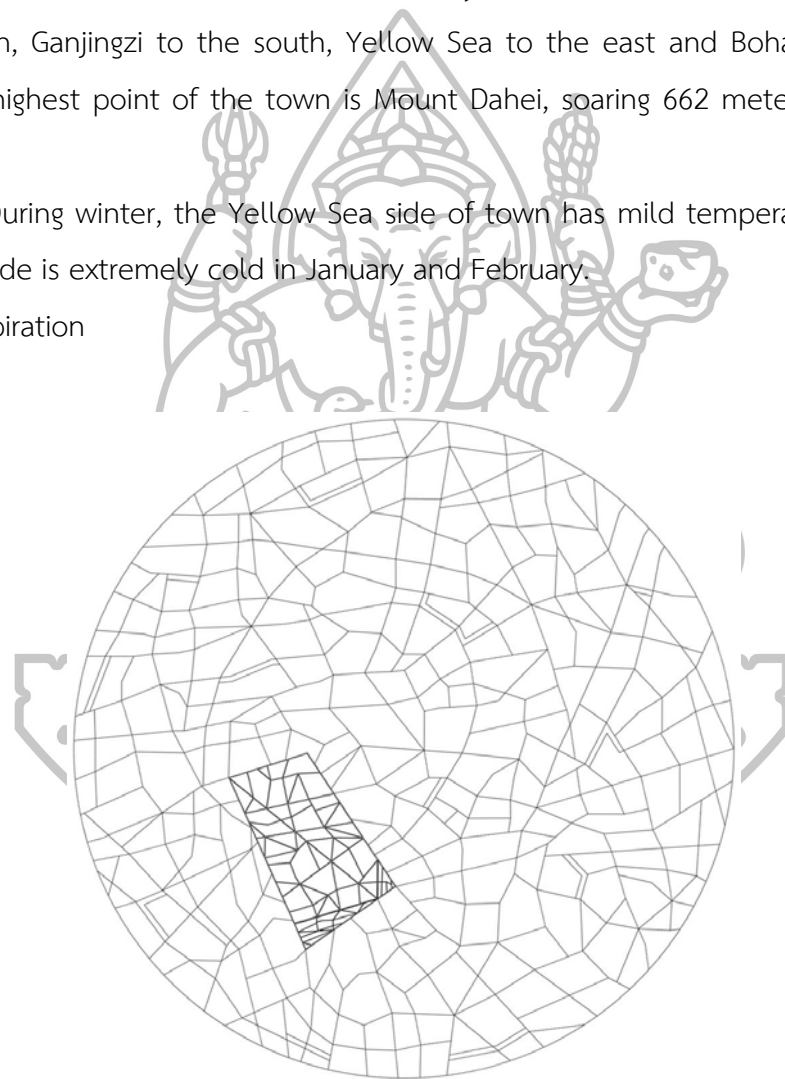


Figure 46 The inspiration of ceramic museum

Source: **The inspiration of ceramic museum**, accessed August 3, 2016, available from http://images.adsttc.com/media/images/5279/7c29/e8e4/4ef0/0400/0084/large_jpg/Floor_Plan.jpg?1383693347

The architects took inspiration from the landscape and past trade of the community, which was ceramic making. The relationship between natural resources, the locals, way of living and the environment was a theme of the work.

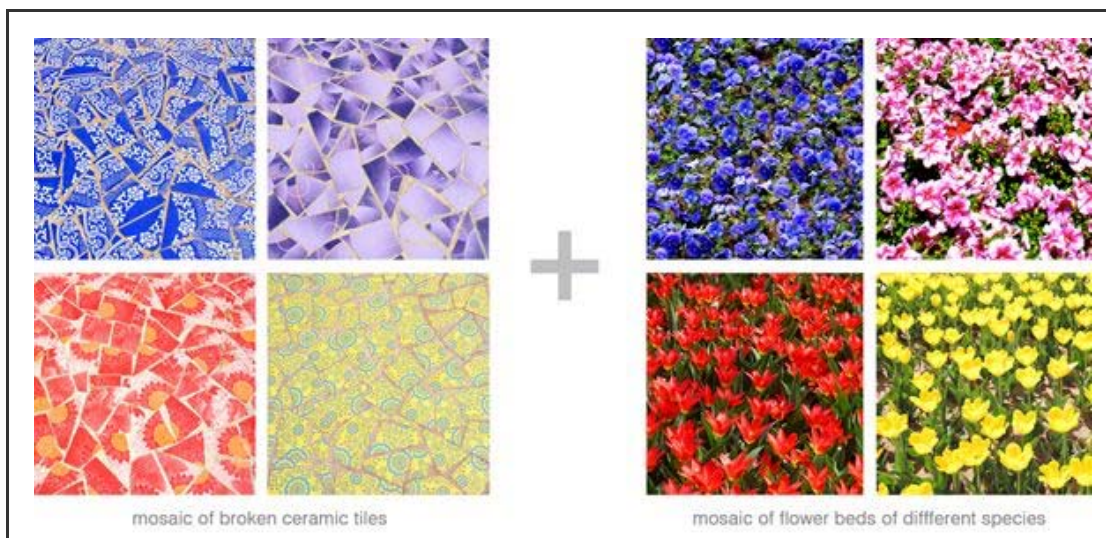


Figure 47 The combination of inspiration

Source: **Ceramic Museum and Mosaic Garden**, accessed August 3, 2016, available from <http://landarchs.com/wp-content/uploads/2014/02/Ceramic-Museum-and-Mosaic-Garden2.jpg>

Design

Design of the Ceramic Museum and Mosaic Park conveys contextualism concept directly, resulting puzzling yet impressive shapes. Colors of flowers from the garden and broken ceramic tiles create colorful combination. Indoor space employs the shapes of broken ceramic. The use of monotone color inside the buildings creates contrast. Sunlight makes the space even more beautiful.

Perception

The Ceramic Museum and Mosaic Park project directly applies function. The charm and attractiveness of the project is the use of local materials that reflect profession, wisdom, community as well as properties of materials through design. The building catches attention with the use of ceramic tiles on exterior. The

combination of colors, patterns and landscaping makes the buildings even more remarkable. The diagram illustrates that the designers have conducted research on colors and patterns of ceramic with the flowers in an effort to to express the concept more tangibly.

Case 6: Products designs inspired by Mount Fuji, Japan

General information

Case study No. 6 involves several pieces of work featuring different characters that share the same theme, Mount Fuji. Products inspired by Mount Fuji are commonly found at tourism locations near Mount Fuji, and perceived as the symbol of Japan.



Figure 48 The mount of Fuji

Source: **The mount of Fuji**, accessed August 3, 2016, available from http://www.be2hand.com/upload/201606/201606-10-154344_Gz-0.jpg

Geography

If cherry blossom is the representative of Japan, Mount Fuji is the symbol of the country. This iconic cone shape volcano is recognized globally. Mount Fuji or Fujisan is considered the most beautiful volcano in Japan, or even in the world according to many. It is the highest mountain peak in Japan at 3,776.24 meters above sea level. The circumference at its base is 124.8 kilometers. The diameter of the base is 40 – 48 kilometers, and 480 meters at the crater.

Iconic inspiration

The beauty and grandeur of Mount Fuji make this volcano almost a sacred place. It was believed to be connected to heaven. Mount Fuji was named after the Japanese goddess of fire, Fuchi. A shrine for the fire goddess still stands on Mount Fuji. In the past, the indigenous Ainu regarded the peak of Mount Fuji as a sacred place where no one should tread on until a pilgrimage trekked there in 1206 and built a Shinto shrine. Nowadays, so many Japanese and international tourists travel to the shrine every year. Japan allows trekking to Mount Fuji's peak only 2 months annually when the snow melt, during July and August. Tourists can travel by car or bus to the level 5 of the mountain, then walk from level 5 to the peak at level 10. It takes approximately six hours to go up and four hours to come down. Most pilgrims and tourist choose to make a 2 day 1 night trip. There are rest areas and shops selling food and drink, or even hot meals, along the way to the peak. Trekkers can have their pole stamped as a memorabilia. Trekkers may spend the night at rest areas to sleep for a few hours in a sleeping bag before leaving early to catch a glimpse of sunrise on the peak in the morning. The peak often amazes visitors who do not expect there are a shrine, telephone booths and postal box at for visitors to drop a postcard stamped with Mount Fuji postmark to friends and loved ones. Many Japanese wish to conquer Mount Fuji and ask for their wishes to come true at the shrine once in their lives.

Design

The cone shape and simple line represent Mount Fuji well. The most noticeable point that is often used as a gimmick in design is the free form shape of

the crater. Color that changes with season is another character of Mount Fuji that is applied to draw attention to the design.

Design patterns in Japan have developed, as well as today, but a few things to maintain the nation's personality. Cultural expressions are clearly making a design to communicate identity. Express themselves well.

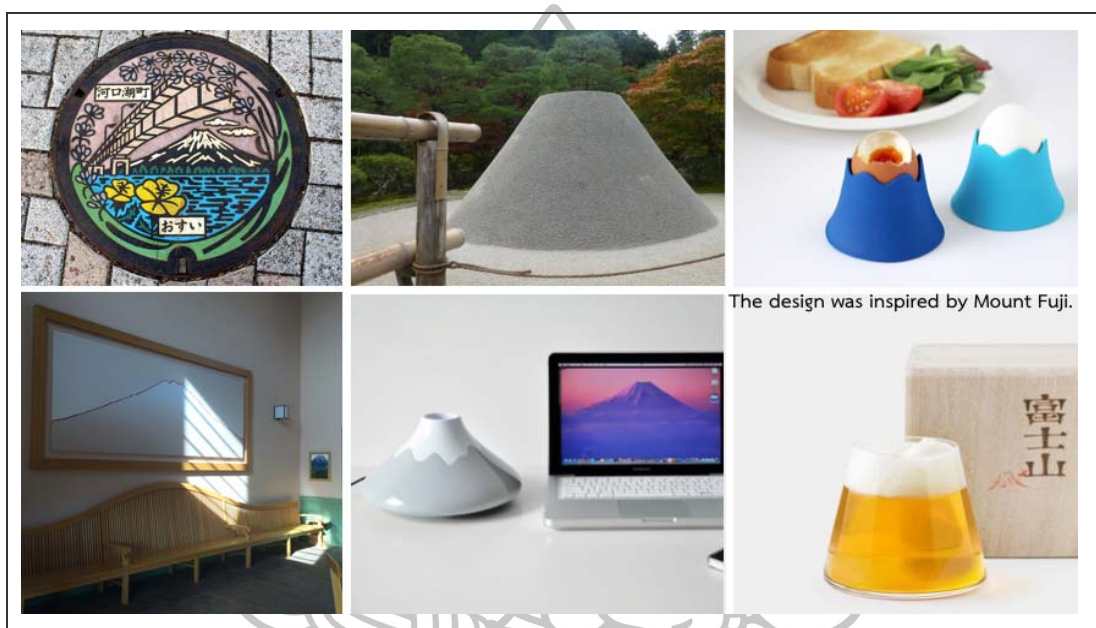


Figure 49 Various of product inspired by Fuji San

Perception

Products that symbolize Mount Fuji represent appreciation of spatial characteristics. They portray outstanding shape of the volcano in various perspectives. Almost every piece of work reviewed apparently display the shape of Mount Fuji with the touch of Japanese design characteristics. “Shape and simplicity” is portrayed meticulously, expressing the soul of Mount Fuji.

Summary of case study

In the case study of the nature of the design inspiration from nature or natural elements. With the workpiece can be expressed to the representation of space or the community that

The characteristics of the design using the natural characteristics, it was found that the origin of the notion that the nature tangible. Can production were connotation are available. Links with the area or community. The importance of the identity of lines and shapes. Harmony with the environment.

Design for representation, found that the design will represent the bond to the attitude, belief, or stories of local or unique intellectual car available. Increasing the value of the target. Until the essence with the interaction of faith with the environment, causing the one the same spirit of place.



Chapter 3

Research Methodology

This research implements qualitative approach with three objectives as follows:

1. To explore Galayani Vadhana district with the objective to find characteristics of the district and inspiration for designing.
2. To develop and evaluate design process through recognition of the community.
3. To develop knowledge on designing for the community and concepts for development of spatial characteristics design.

The researcher emphasize on data collection and interpretation based on information on the location and a community. Data collection employs multiple technics. This chapter discusses data collection and data analysis in two processes as follows:

- a. Development of tools for analysis of Galayani Vadhana district area
- b. Analysis of the design process and design appraisal through recognition of the community

Each process involves following procedures:

1. Development of tools for analysis of Galayani Vadhana district area This procedure consists of two steps

- 1.1 Development of tools for analysis of Galayani Vadhana district area
- 1.2 Development of tools to find characteristics of the district and inspiration for designing
- 1.3 The purpose of development of tools for analysis of Galayani Vadhana district area is to establish community-specific indicators. The indicators must

correspond to the contexts and characteristics of the community. This step adopts participatory research approach as follows:

1. Research community or area

The research area is Galayani Vadhana district, Chiang Mai province.

2. Research site

The research is conducted at a community in Galayani Vadhana district, Chiang Mai province.

3. Research methodology

The research methodology includes

Literature review

This is the first step before field study. Literature comprise primary and secondary literature. Primary literature includes official documents regarding the establishment of Galayani Vadhana district, describing geographic and demographic information; for example, location, important places, water sources, forest, mountain, way of living and culture of the Pgaz K’Nyau.

Secondary literature includes academic papers, research papers and minutes of meeting concerning the area; for instance, research on fountainhead forest and research on way of living of the Pgaz K’Nyau. Documents are vetted for credibility from experiences and academic roles of the writers, as well as referenced sources.

Field study

After satisfying level of knowledge is built from literature review, the researcher prepare following steps:

- Step 1: Preparation

The researcher coordinate with officials and residents of Galayani Vadhana district to arrange a visit the community in order to meet with the residents. People whom the researcher coordinate with can be identified in three groups: government officials or representatives of local organizations who work in the field, community members who are community leader in terms of local culture and

practices and are respected by community members, and the community members. The researcher must inform relating persons of the objectives prior to every visit.

Step 2: Site visit to collect data

Four research approaches were employed

1. Participatory rural appraisal – The researcher participate with diverse groups of community members such as officials, community leaders and residents in the community to appraise how they work or live daily life. Participatory rural appraisal is applied to evaluate following issues

Status of the community; for instance, population, area, environment, tradition, beliefs, ritual calendar, and relationship within the community and between communities

Distinctive characteristics of the district

2. Observation–Both participatory and non-participatory observations are performed by having a conversation with community leaders, villagers and officials to understand local culture about

Daily routine

Physical and mental health

Education

Tradition, rituals

Relation within community and between communities





Figure 50 Experience from Galayani Vadhana district.

Data verification is made using data triangulation technic to verify the relationship between people, time and place. Data collection method is also verified by implementing several methods and aspects to collect data to assure that the acquired data are the same type.

4. Data analysis

Data collected from site visits are primary data. The researcher also gather data from documents and site study; i.e. community status; for instance, population, geography, environment, tradition, beliefs, ritual calendar, and relationship within the community and between communities to analyze and develop tools for analyzing Galayani Vadhana district area. The information acquired from site visits receive more attention as it is from direct experience and more up-to-date.

2. Development of tools to find characteristics of the district and inspiration for designing

This step aims to find characteristics of Galayani Vadhana district to develop spatial characteristics from. This study develops the tools from results of appraisal by the researcher, together with asking for opinions on what represent the area from outlook of the locals.

This procedure involves

1. Research community or area

The research area is Galayani Vadhana district, Chiang Mai province.

2. Research site

Physical are and its surroundings within the boundary of Galayani Vadhana district

3. Research method

Literature review

Literature review is the first step before field study. Literature comprise primary and secondary literature; i.e. documents, research papers, people involving with Wat Chan Pine Forest, geographic data and information on the forest, including specific characteristics of pine forest, pine tree and other related specific elements.

Field study

After review literature until certain knowledge about the area is developed, the researcher perform the following 5 steps:

Step 1: Observe with understanding

Understand ethnic groups

Chawewan Prachuabmoh (2008) cited Jones (2005; 40) that ethnic group is one of main concepts that sociologists use to identify groups of people. This concept has been widely adopted in sociology since the '90s. Prior to that, sociologists emphasized on identifying human behaviors, "culture" according to the terminology, more than considering by groups of people. Fredrik Barth (1969) was a leading thinker who ignited ethnic study by proposing ethnic identity and ethnic boundary concepts. The movement was novel and had characteristics of subjective philosophy as it emphasized on the feelings of ethnic group members on who they were, what group were they members of, how were they different from other groups, and what characteristics of culture had influences on ethnic identification.

Barth proposed that the outlook on an ethnic group changed from considered as a group that share the same culture to a form of social discipline, which had close meaning to the term "status" in the process of interaction between individuals in the same ethnic group or different groups. Defining the meaning of ethnic group by this concept promotes the significance of cultural characteristics in identifying ethnicity of an individual, and becomes an important symbol in telling if one individual and others are members of the same group. In this aspect, ethnicity is similar to other social status such as gender, class, age or residence. It becomes a mark to determine the standard of interaction, allowing the both parties to know how to interact properly. According to this concept, a key factor in ethnic study is the process of identifying ethnic identity, ethnic category, and ethnic boundary in interaction between individuals from different ethnic groups. Ethnic study is a procedure in the process to explore the community or group of people. Regardless of the area, they express their identity through the environment, their outlook to the outside or from outside-in. Results of ethnic study provide diversity of perspectives on the product that shall be designed or created, depending on the "people" studied.

Step 2

Creating story of the area and community through photographs

Immersing in the community through photography yields great benefits.

Taking photo, both as planned and by impulse, releases the photographer from a boundary and provides a chance take control of everything as guided by imagination.

The message received from photos may be as expected or a surprise, but it definitely triggers the memory or creates continuity of the incident.

Step 3

Accessing daily routine

This step is beneficial to the study. The researcher is allowed to see daily life of people. There are several tools the researcher can use; for example, taking note, photo taking, having a conversation and observation. Critical factors in this step are period of time and behaviors or activities that happen, which can be considered as an overview or as a snapshot of life of a person or group of people.

Step 4

Understand self

What do they want?

To answer this question, the researcher consider what people or the community want. Depending on the basis of each area, different places may have different requirements. Critical issue at this step is questions to ask community members. If the questions were develop without knowledge from literature review or reference, the answers may not be substantial.

Literature review presented in Chapter 2 illustrates the relationship between people and community and the environment through Karen's tradition and rituals. This relationship may provide interesting answers.

What is strong point?

This question looks at strong points of the community combined through surrounding elements. The environment makes the community or community members believe they are strong at that particular subject. The answer may not be physical. It may lie in their feelings, way of living or spirit that is different from other community's.

What do they fear?

Fear arises from the awareness of weak point or from external elements that create discourse, or from certain reason causing each location to become weak. Some communities have specific fears; e.g. changes in way of living and other changes. These conditions are guidelines for the researcher to develop a tool or a proxy to communicate or abstractly prevent the community to reduce the impact of external forces.

What are their beliefs?

Belief is personal. However, belief hold by the entire community may stimulate the characteristic that is more powerful than belief, or it may restore such belief to return to existence. Practically, rituals of the community turn beliefs into tangible element.

What is the core value?

Values arisen in the community occur from what is seen as a whole. Value of a thing significantly depends on the environment; for instance, a mobile phone has no value in a thick forest where telephone signal does not cover. Context is a tool to appraise value of things that already happened or may happen in order to determine value of the Karen living at Wat Chan.

Step 5

Speculation of future incidents and situation by applying knowledge from knowledge

Whenever there is change to something in the community, speculation is essential during design process. The effects on people and community must be speculated. Different views on change, such as acceptance/opposition/favor/dislike, can stimulate new creation and allow the researcher to propose a strategy or framework to the community in order to generate new ideas.

Step 6

Learning

Learning happens only whenone has been through situations until opinions, feelings and understandings are crystallized, and that person can explain the cause and effects concretely. Knowledge attained from learning lead to rich

integration of knowledge, organization of knowledge, and development of the framework for designing.

4. Data analysis

The acquired data are primary data to build on by integrating constructive points of view and attitudes, as well as various way of thinking, to achieve inspiration. Visiting the site allows the researcher to develop deep understanding of the area. The researcher realize the relationship between Karen people and the forest, the way of life, culture and rituals that integrate into spatial characteristics specific to Galayani Vadhana district.

3. Analysis of the design process and design appraisal through recognition of the community

When designing work owned by the community or people in the community, an insight on basic characteristics of the community and area is essential. Physical and psychological relationship and impression on the community or area influence the work that represents identity of the community. Process in creating the work includes:

Step 1: Analyze an inspiration and creation

Step 2: Analyze context and relationship

Step 3: Analyze sketch idea

Step 4: Analyze function and look

Step 5: Analyze the design process through recognition of the community

Step 6: Analyze the process to improve on knowledge on design

Step 1: Analyze an inspiration and creation

Inspiration is important. It is what drives us. Inspiration is the power to kickstart and carry us to finish the task. There is a proverb about an inspiration saying “He will soar on the wings like an eagle. He will run and not getting tired. He will walk and not exhausted.” Inspiration means a power within a person that is used to drive thinking and action to achieve desired objective without having to rely on external motivation to ignite mental motivation to stimulate thinking and action as

common to most human. No matter how hard it is, a person is ready to fight obstacles to reach desired success. A person is ready to sacrifice something if doing so lead to achievement.

Creativity is new ideas, methods, attitudes, understanding and new view on problems. Examples of tangible outcomes of creativity are music, performance, literature, drama, invention and technical innovation. Sometimes creativity is subtle; for example, asking questions that expand the frame of work which gives certain answers, or perspectives of the world or problems outside existing frame of thinking.

Creativity is a linkage of thoughts to develop several solutions. It is a process of generating new ideas to look for new possibility, finding new options and improving them. The process includes 6 steps:

- 1 Mess finding
- 2 Data finding
- 3 Problem finding
- 4 Idea finding
- 5 Solution finding
- 6 Acceptance finding

Creativity process may occur intentionally or by chance. It can be attained by giving education, training and brainstorming. More than half of the world's great discovery happen because of serendipity or while trying to discover other things.

The researcher found during field study that the way of living of the Karen people is unaltered. The way they live is in harmony with natural environment. It is almost unbelievable that such peaceful place still exists in Thailand.

The researcher also develop three perspectives on this finding as explained below:

Bird's eye view: Natural boundary of the district functions like a natural fort that makes the area peaceful. The solitude of the district maintains the lushness of fountainhead forest and pine forest. The location at the fringe of famous locations has a role in protecting the area since such tourists mostly do not venture further from the adjacent districts, Samoeng or Pai. These factors enable Wat Chan Pine Forest or Galayani Vadhana to retain its serenity until now.

Outside-in perspective: Pluralism theory recognizes the diversity of concepts and encourages such diversity in the society. Pluralism is against domination of a theory interpretation by single concept as can be seen from cultural pluralism that promotes cultural diversity.

Status of city dwellers and status of the minority groups are a discourse that creates diversity. Outside-in perspective may shine the light on certain values of the community or find a way to implement status quo.

On the contrary, the inside-out perspective clearly expresses identity of the community. It is an effort to communicate with the outside world, not building a wall. If a community is able to develop its apparent identity, outsiders will acknowledge it and learn about it or know what to do and how to behave in that community.

Step 2: Analyze context and relationship

Contextual analysis is one of the key process of this study as there are overlaying contexts in many perspective in Galayani Vadhana district. Analysis is made by defining the relationship using an ecological framework since physical characteristics of the area is an ecology system. In addition, the way of living progresses in cycle. This model enables clear relationship analysis as well as verification of binary opposition relationship. Results of contextual analysis will facilitate design development.

The relationship is defined by literature review. Site visits provide empirical evidence of the contextual relationship and explain the strength of relationship whether it is positive, negative or no relationship, as well as both tangible and intangible impacts of the relationship

Step 3: Analyze sketch idea

Sketch idea is preliminary design after the inspiration and contexts are crystallized. Sketching is a method to express an output or simple crystallization. It helps explaining how the idea is developed. The charm of rough sketch brings about the possibility to develop the idea further.

Drafting and sketching can be implemented to express the idea concretely. It can be made quickly and easily. If someone plans to make a chair, the first step is

to develop an idea about the chair. The person should come up with several ideas to select the best one. To prevent forgetting, the patterns generated in the head should be roughly drawn. This draft is called sketch design. Once the choice is made, the sketch design is transformed into a drawing.

Sketching in architecture follows the drawing principle, but the tools are not required. Free hand sketch using a pen or pencil is sufficient. It is often made with pencil as revision is easy.

Step 4: Analyze function and look

When a product is developed, it must be reviewed as per step 1 and 2 to analyze an inspiration and contextual conditions. Information received from study of a pine cone and the relationship between nature and the community that leads to many rituals is a tool in verifying the thoughts and design product. Some designs may carry both strength and weakness. The key to this process is to explain “performance” of each product from the perspective of the designer, who knows what happens since idea formation until the product is made.

Step 5: Analyze the design process through recognition of the community

After the product is appraised by the researcher, it is brought to Galayani Vadhana district for appraisal by members of the community. This process requires preparation and time since each community has unique characteristics, culture and frame of thinking.

Appraisal by the community, particularly the area that is the site of the research, is an effort to seek acceptance by the community. It helps the researcher to access personal capabilities and that of the area, participation of the locals as well as the direction to develop the products further. The researcher must respect others' points of view and open to every comment. Without open mind, the product will not be an outcome of core concept or genuine vision of the communities.

Step 6: Analyze the process to improve on knowledge on design

After appraisal by communities, the researcher have a product evaluated by perspectives of two owners; the researcher as the owner in creativity aspect, and the community as the owner of wisdom or core concept that the researcher build upon.

The idea to build upon the product is the improvement of knowledge, ideas and final concept that required understand and creativity. Expanding the knowledge is necessary nowadays as it enhances continuous development. In addition, it reinforces knowledge to prepare for changes. The knowledge can be integrated into everyone's life efficiently. Therefore, this issue should not be overlooked.

One key element in designing is ready to rethink. Sir Alexander Fleming proved that rethinking turns failed bacteria culture into discovery of penicillin, the first antibiotic. To quote Louis Pasteur, "Opportunity only favors prepared mind."

4. Summary of Methodology

Research methodology of Theory, Analysis and Design Development of Spatial Characteristics:

Case Study of the Identity of Galayani Vadhana District, Chiang Mai Includes the following steps:

1. Development of tools for analysis of Galayani Vadhana district area

As a step in understanding the space. Social conditions. Environment from the "direct experience" of investigators to collect indirect information. The selection of appropriate information, the community developed as a tool for creative concepts and design. The study found that every community or the area wants to develop tools from within. Rather than have developed from the outside. As a humble and respectful towards the research context.

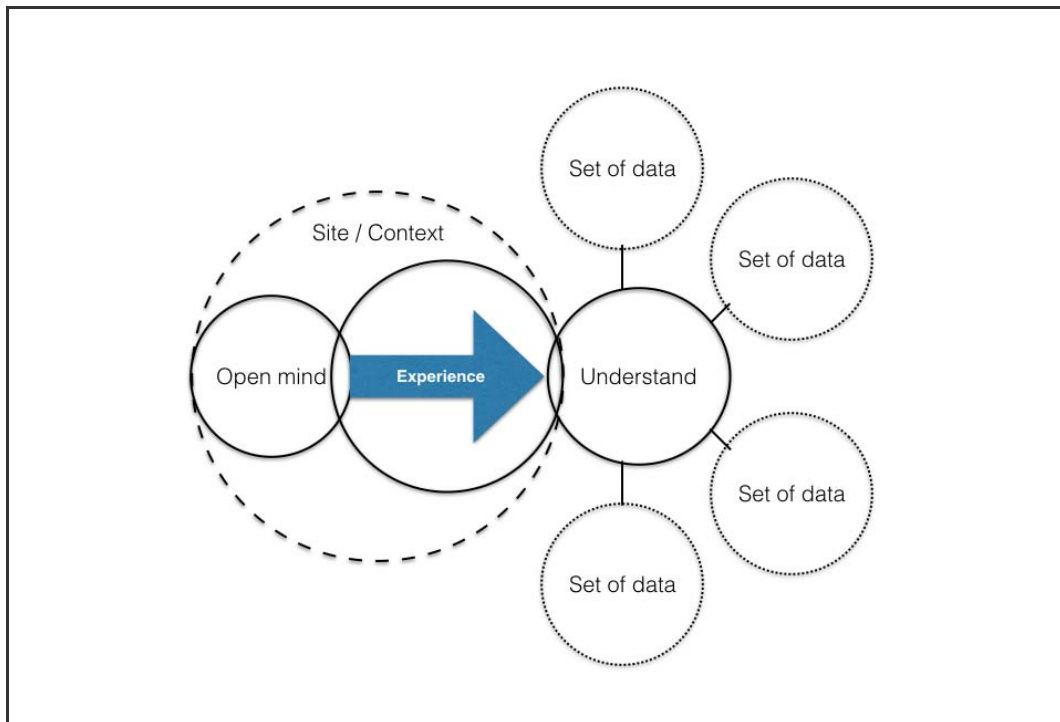


Figure 51 The diagram of development of tools for analysis of Galayani Vadhana district area

2. Analysis of the design process and design appraisal through recognition of the community

Analysis at the design stage to the recognition of the community. The design of the data sets derived from the experience with some of the real environment. The development of abstract concepts into concrete interpretation of the meaning of design. So far, the importance of feedback or awareness on the value of contributions from the community. Causing assessment "Relations" between the perceptions of the community with designs by designers.

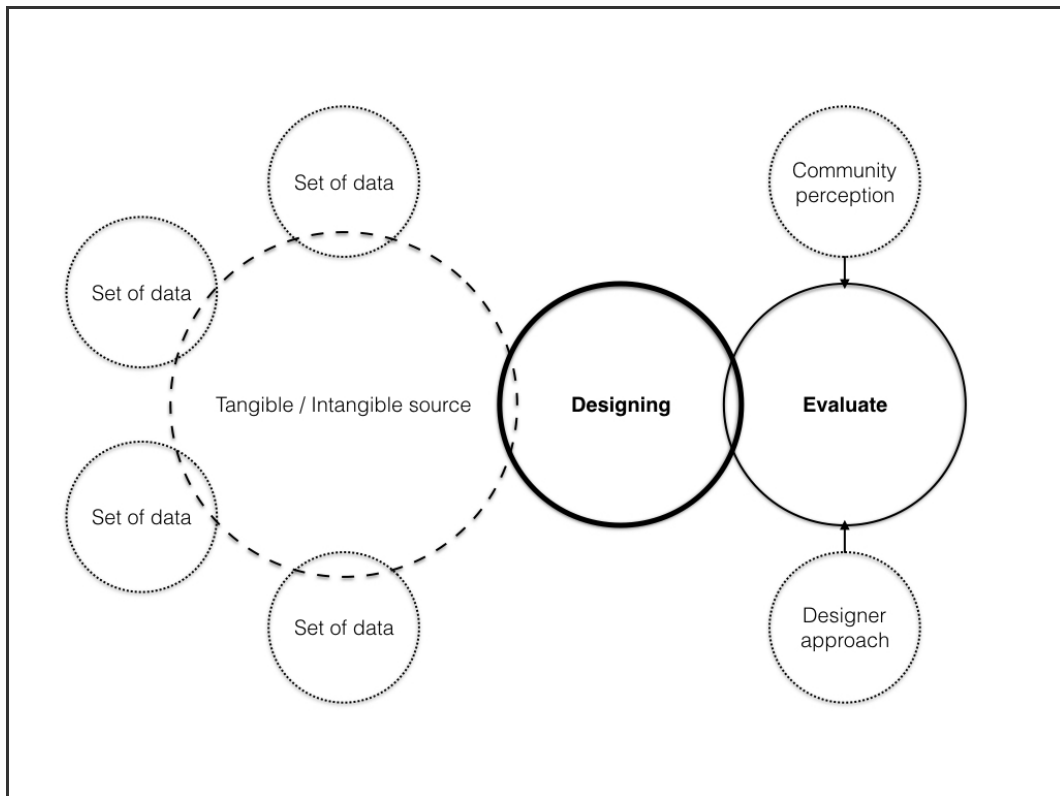


Figure 52 The diagram of analysis of the design process and design appraisal through recognition of the community



Chapter 4

Design Development

Introduction

The development of designing is situated as an important process of working. Besides achievement motivation, the designing was developed from the design techniques, analysis, evaluation, and concept. These elements were used to develop the present study. The main processes were shown as follows:

1. Inspiration analysis from Galayani Vadhana District
2. Design for community
3. Development of design concept
4. Designing spatial characteristic
5. Testing and evaluation of overview process and design
6. After design conclusion
7. Evaluation from Galayani Vadhana Community
8. Design for the development of design knowledge

1. Inspired by Galayani Vadhana

According to the review and site survey for the researcher's experience, it found that pine tree is displayed as a symbol of Watchan Pine Forest or Galayani Vadhana District. It reflected the acceptance and the expression of community. It also found that pine cone was marked as the product of cultural growth and community ritual. These things remained the growth and fertility of Watchan Pine Forest.



Figure 53 “Pine cone” inspiration from Galayani Vadhana

Based on the continuing of the study, the physical characteristics of pine cone is rough. It seems as a dead plant without any freshness. In contrast, the pine cone presents its creature. That is, when it was cold, the pine cone leaves were covered in order to maintain core temperature. On the other hand, when it was hot, the pine cone leaves were bloomed. Interestingly, the nature of pine cone is flexible that is able to adjust with the environment, and the survival of any changes. For the above statement, the inspiration of pine cone then gained more interesting.

2. Design for community

This study mainly focused on Galayani Vadhana District because this community naturally contained specific characteristics. For example, there were 100% Paka-kyaw ethnic group live in Galayani Vadhana District. In addition, it is the latest district in Thailand which was constructed under the concept of best practice model of happiness, the integrity of environment, tradition, culture, and ritual.

The results revealed that the Karen ritual has their own pattern of space utilization with different contexts. The tradition and ritual – hand fasting, local worship, the merit before farming and agriculture, and so on. Each ritual used different space based on different forms of merit such as indoor, at the terrace, at

the porch, at the courtyard, at the farm, temple, or in the forest. The pattern of ritual was circulated as a Karen's lifecycle.

The present study mainly highlighted on the behavior found in each ritual. It found that

1. An overview of the behavior found as a floor sitting in the ritual. This manner is the nature of Paka-kyaw. They prioritized on the respect to each other, the respect to the nature and holy thing. These influence the behavior of Paka-kyaw. Therefore, the floor sitting was mostly found in Paka-kyaw ritual.



Figure 54 Various activities and behavior.

2. Sitting in different rituals depended on the contexts that can be varied due to ritual environment.



Figure 55 Various activities and behaviour in different context.

3. There was a sitting in group among rituals. The group was various due to the kind of ritual, individual relationship, and their social status.



Figure 56 Personal space and social status.

3. Analysis for concept development

Analysis of pine cone related to shape and form

The characteristics of shape The shape is easily recognized characteristic cone. Top view of a friendly nature that makes a sphere with a radius reduced. The advantage is no more complex shapes. Can be studied and explained Or turn to alternative design to use less in a variety of shapes.

Circle is a geometric figure with a three-dimensional side curved surface smooth. All points on the curved surface and the point away from the fixed point of one point for a rate called the fixed point, the center of the sphere, called phase rate. The radius of the sphere. Various parts of the sphere at some point, move around the fixed point of point by point of motility and fixed points with equal distance. The line is a curve is called the circumference circle or if drawn directly from one point on a circle through the center to the circle on the other side we call the line diameter so that water diameter length is twice the radius of the circle.

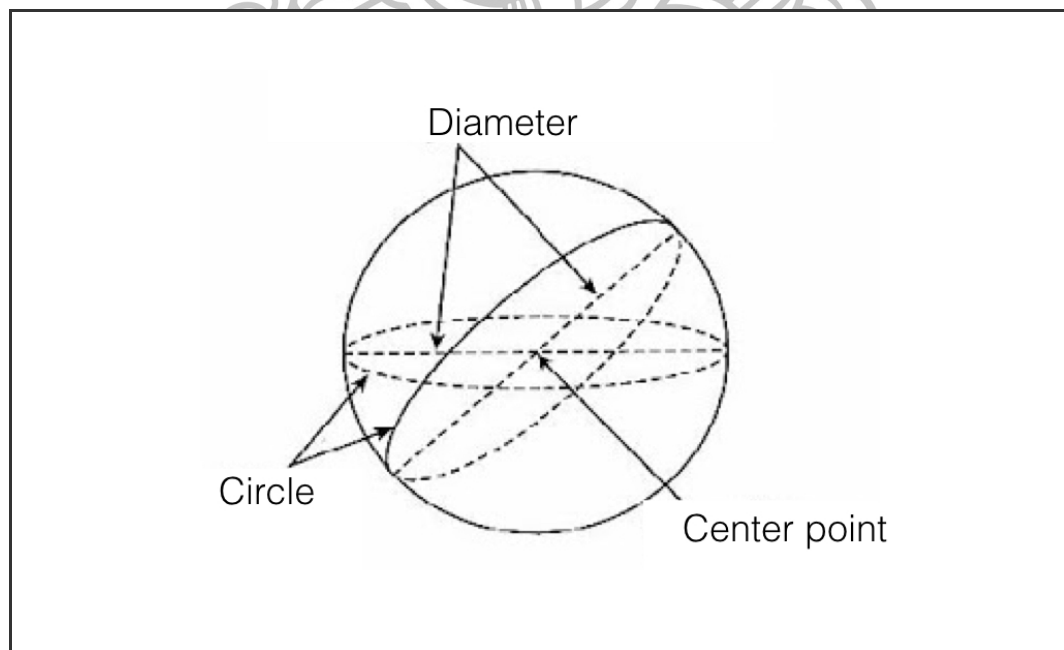


Figure 57 Analysis of circle.

The application of biological concept

From the first impression in the area of Amphoe Galayani Vadhana. Find that perfect system it eases strain so strength and stability in the physical. Research, therefore, interested in the technique of "mutations", where it can be seen that in a biological, genetic characteristics, new. Change from the inside out.

Change shape, internal structure is the result of genes, which change may occur because.

1. missing (deletion or deficiency) of any part of a chromosome.
2. additional (duplication) are a part of a chromosome. The rise more than existing normal.
3. to change the position direction (inversion) by switching the position of a gene within the same chromosome because of the lack of 2 locations on chromosomes, so it doesn't fall off and deficits disappeared. But per the original chromosome switches together.
4. switching (translocation) caused the Exchange portion of the chromosome is a chromosome that is not between Wuchang Vegas together.

Which of the above technique is so attractive that will be performed by all four characteristics into consideration during design.

Creating concept design

From the inspired design of pine cones. And study the characteristics of the persona cones. Contributes to the creation of an alternative design of emergence. The education system is based on the cultural and ritual action ฤๅ Pattern of behavior are so mixed up.

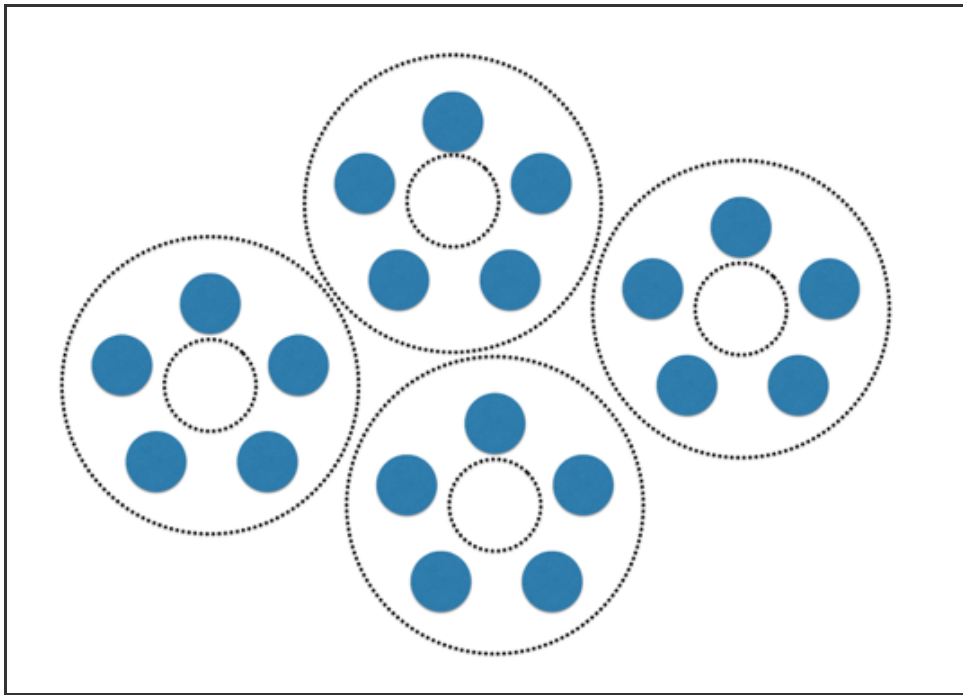


Figure 58 Small group sitting pattern

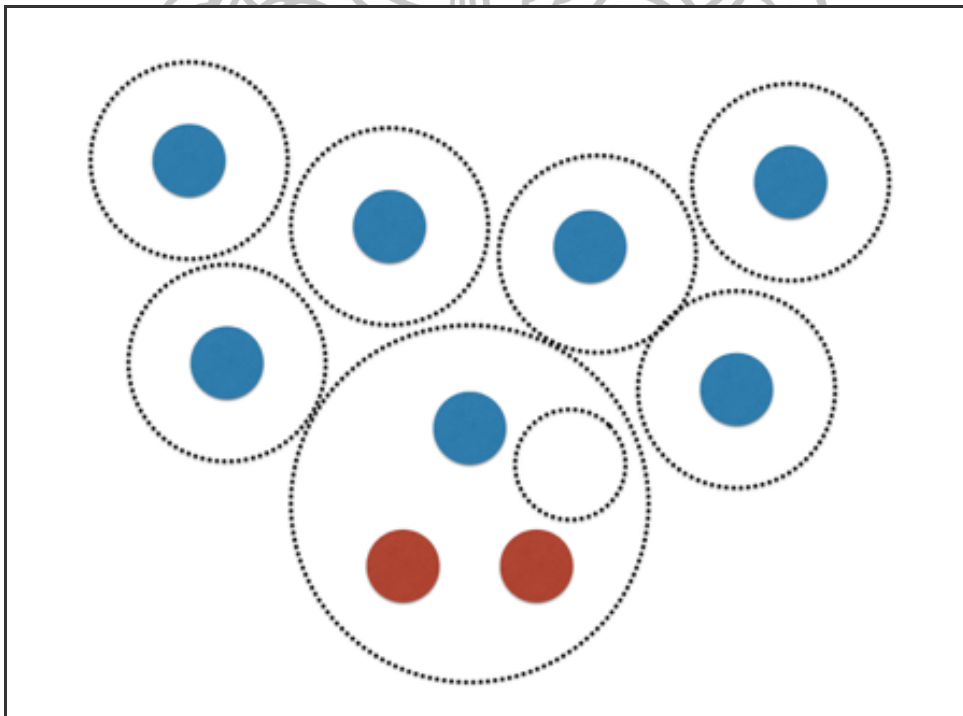


Figure 59 Medium group sitting pattern with leaders

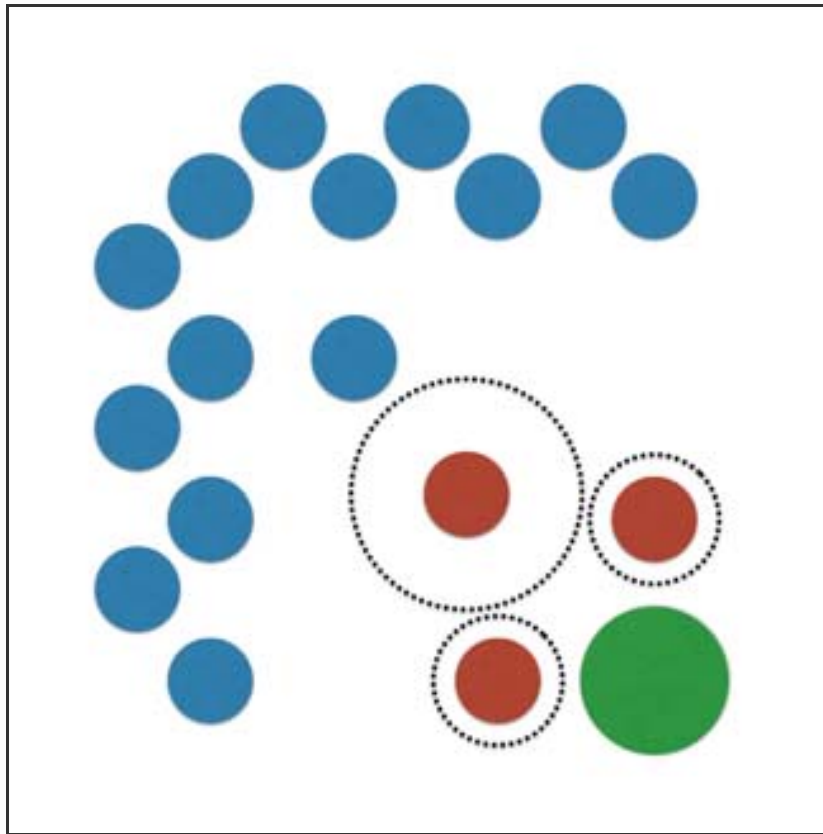


Figure 60 Large group sitting pattern with leaders

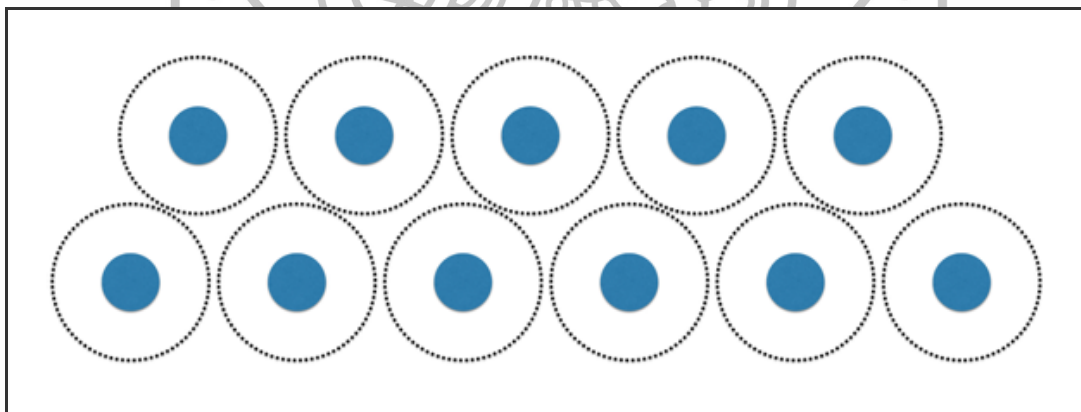


Figure 61 Linear sitting pattern.

Which can be seen through the movement of sitting in a variety of dimensions. Includes a variety of analysis of child care. That can be analyzed in various aspects.

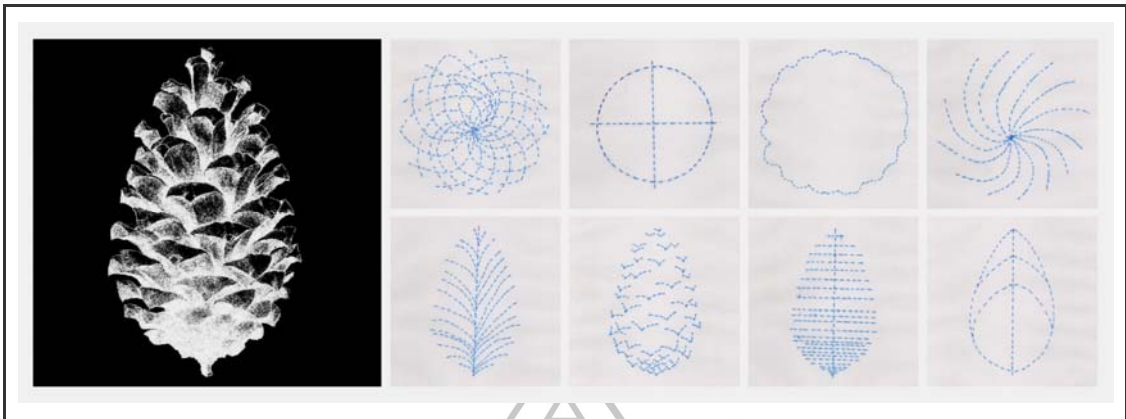


Figure 62 Analyse the pine cone.

The analysis of the past to create a system of concept development, design Spatial characteristic as follows.



Figure 63 The diagram of creating Spatial characteristic of Galayani Vadhana.

The diagram is a key step in all four main steps to get a result in step 5 you can see that the details of the element of inspiration. Study and cultural rituals that Karen is. In this procedure, it is performed using biological concepts to adjust to

changing the system of Pattern mode or manner of shapes. Shaped differently and are causing certain characteristics called Spatial characteristic.

4. Designing spatial characteristic

In order to designing a work to meet spatial characteristic in community, the researcher mainly focused on the ritual response of community as well as create the design techniques to develop the characteristic and shape inspired by pine cone. There were six pieces of work as follows:

1st Designing “Mats”

2nd Designing “Den”

3rd Designing “Shelves”

4th Designing “Stand lamp”

5th Designing “Table 1”

6th Designing “Table 2”

1st Designing “Mats”

Objective

The design of mat or seat was developed from the collected information of Karen’s ritual study. In rituals, Karen sat on the floor. The design provided a variety of size and thickness that related to people, ritual, and location.

Concept design

There was a combination between the top view of pine cone circle and sitting. The concept was developed for the connection of a piece of mat that support the pattern of different form of sitting that was altered in each ritual.

Functional

Sit, Lay,

Materials

The mat was woven by using sedge in a form of braid into circle in the specified size. The thickness was flexible. The mattress can be added and removed for cleaning.

Related Theory

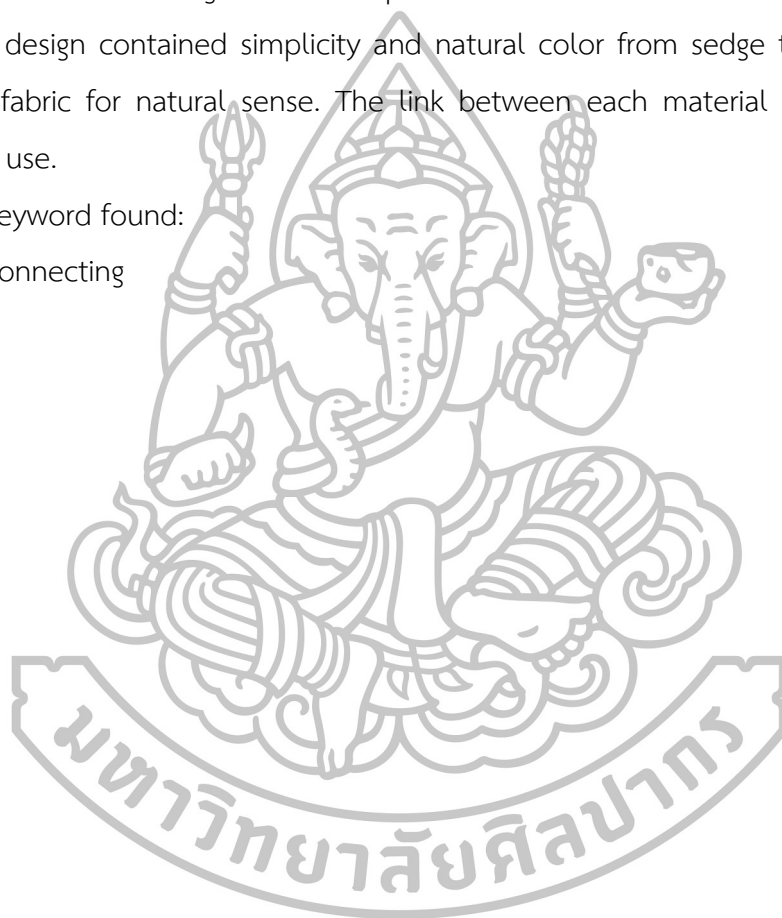
Contextualism and Post-modern that is strengthened the behavioral design. The model of this form was originally applied from the context of Galayani Vadhana District.

Conclusion and Notification

The current design aimed to provide the direct function of behavior in rituals. The design contained simplicity and natural color from sedge together with dark green fabric for natural sense. The link between each material provided the flexibility of use.

Keyword found:

Connecting



Sketch idea

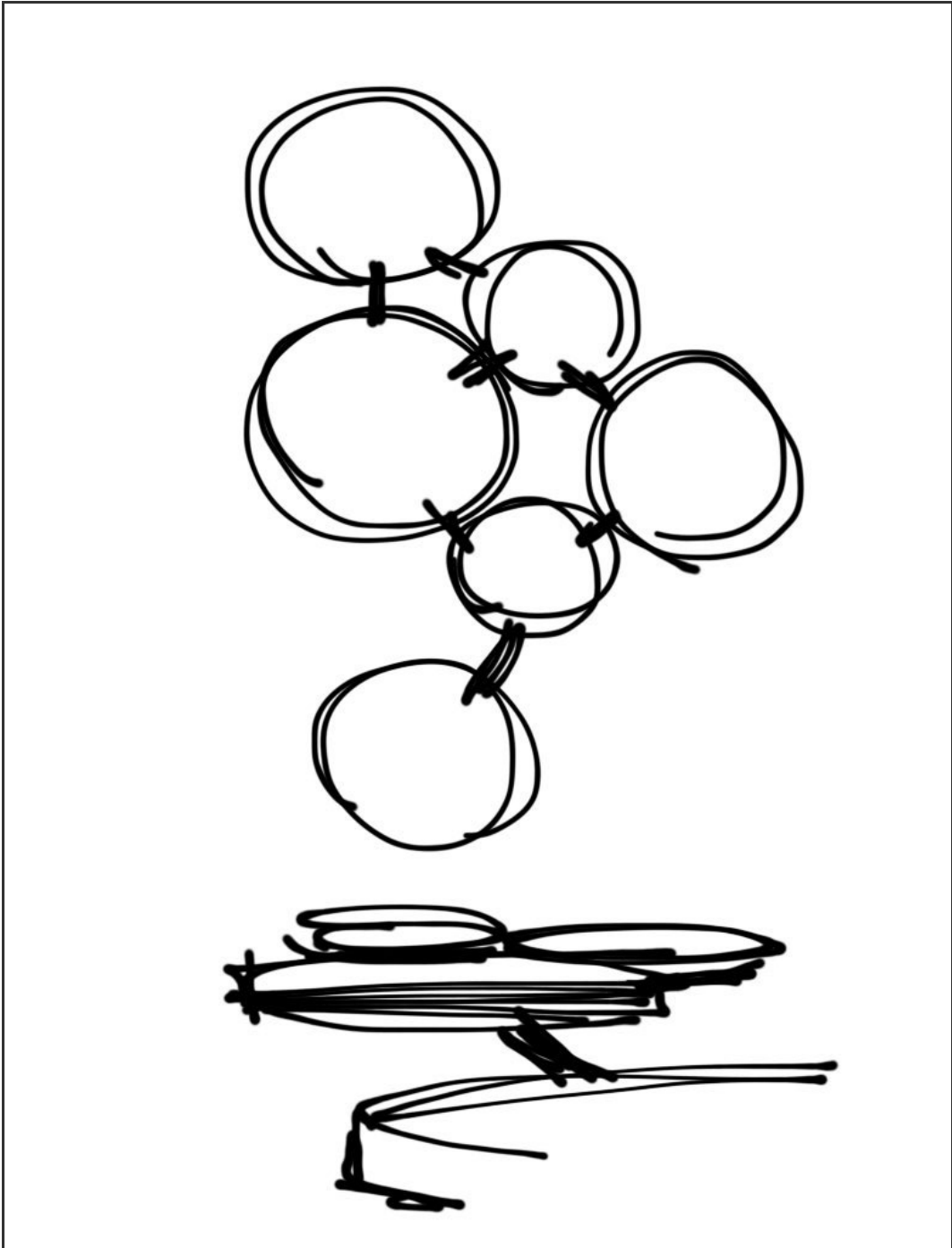


Figure 64 Sketch idea of "Mats"

Designing



Figure 65 “Mats”

2nd Design “Den”

Objective

The design of seat or mattress was in a form of roof or material that covered the space. Its purpose was to use the outside space.

Concept design

The design was followed the 1st design namely “Mattress”. The technique of extrude was used for 3D shape. The shape was developed due to the proportion of beauty and physical. The determining of structure was frankly designed rely on lined pattern of floor plan.

Functional

Sit, Lay

Materials

The wood covered with the wicker and continuous to the arc form.

Related theory

This work based on the concept of postmodernism. The design informed the new form of basic utility and the way to define new behavior in community.

Conclusion and notification

The design revealed that the development of this kind of shape was unable to provide clear abstract inspiration. Conversely, this design was able to communicate the concept of “breathing” in pine cone in relations to the form of fabric stretch. The form of fabric was similar to the pattern of pine cone that provided the “space” for ventilation. The fabric color as well as the fabric texture was thin. In utility, this kind of design supported and solved the problem in “Den” that was thick and uncomfortable.

Keyword found:

Organic and Geometric movement

Sketch idea

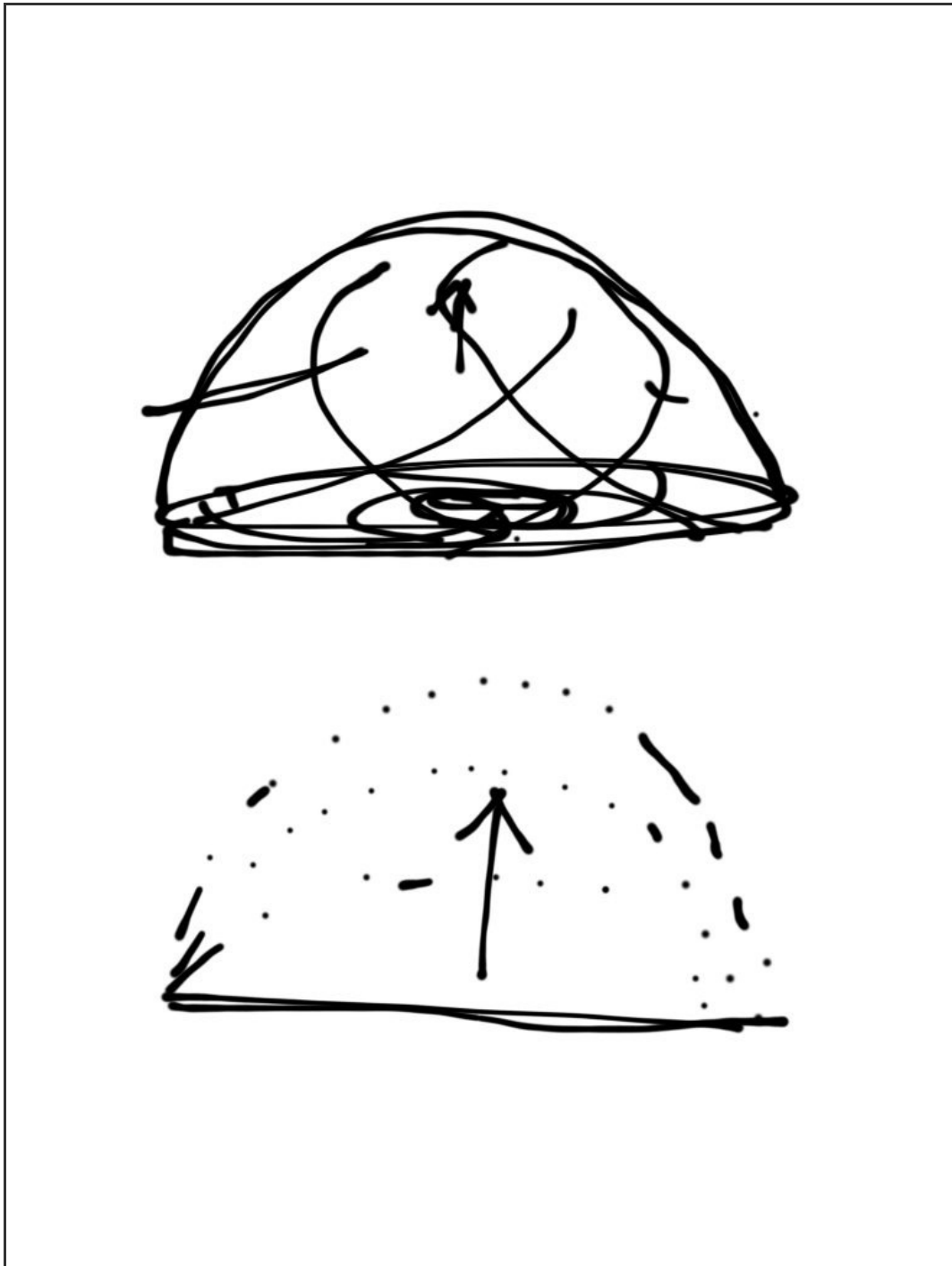


Figure 66 Sketch idea of "Den"

Designing



Figure 67 “Den”

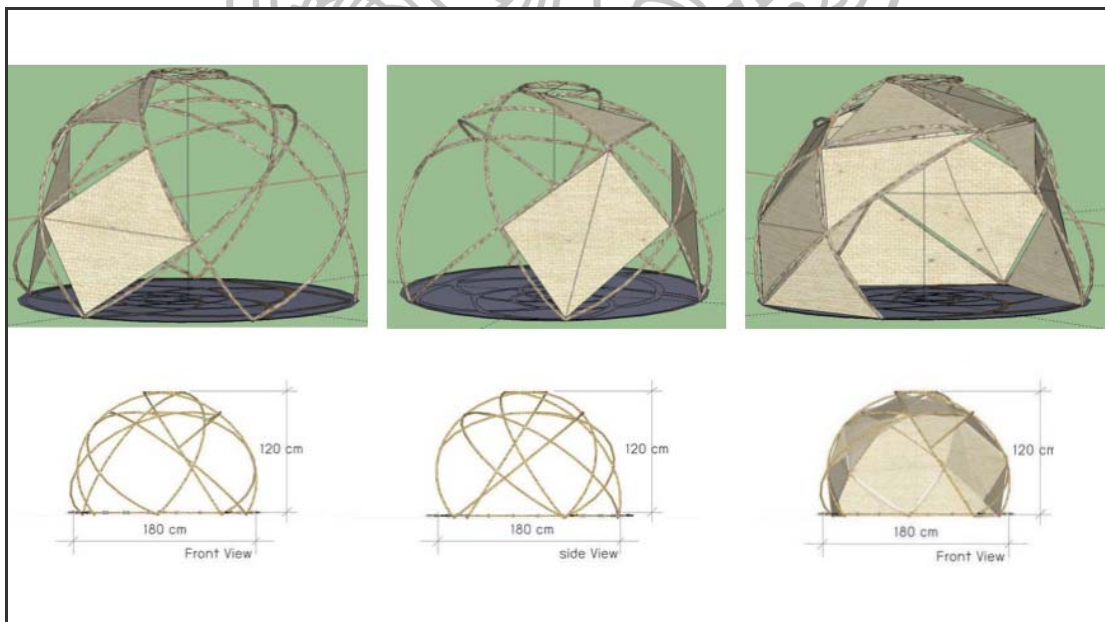


Figure 68 Structural form studies.

3rd Designing “Shelves”

Objective

The design for additional elements of the first work was lack of the support in object arrangement in rituals.

Concept design

The design was based on the “play” with the outline of pine cone, in ellipse. The study focused on the crossover of pine cone outline that found the interesting space. The design was diverse with three sizes.

Functional

Shelf of home decorative

Materials

The wood covered with the wicker was selected to facilitate the user. The fabric was stretch into four points for space using that was able to transform.

Related theory

The design this relationship or reference to the concept Holism due to the ellipse each band must be located in the point of Balance proper position in the set. Remember the target set by themselves. Which is considered the size of the position of the intersection position and place on the floor to connect all the points.

Conclusion and notification

This work provided interesting shape of “the beauty of space”. The design was form the contribution of ellipse frame. However, this work was not related to the utility. Its usefulness depended on the toughness and the flexibility of the fabric.

Keyword found:

Simplified

Sketch idea

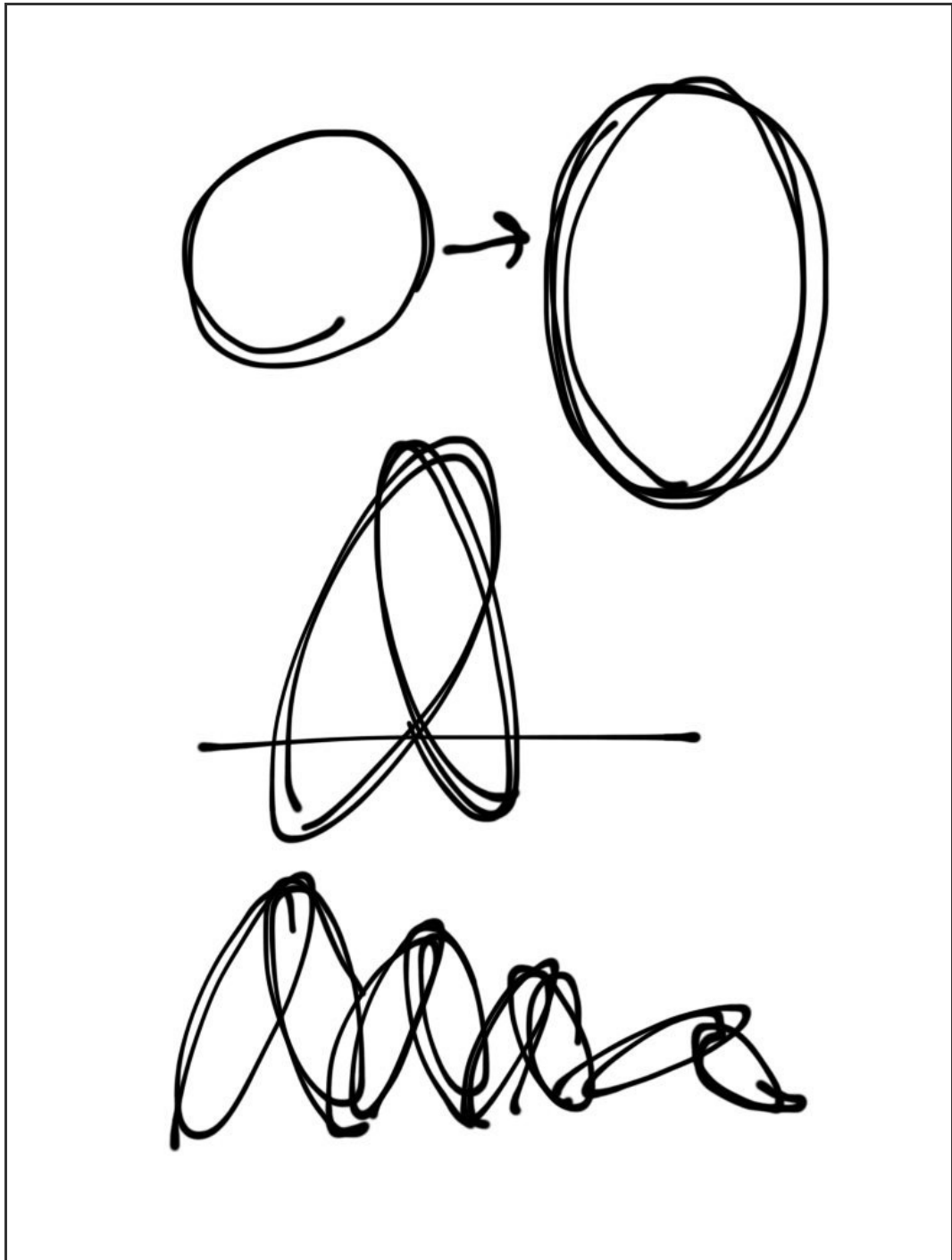


Figure 69 Sketch idea of “Shelves”

Designing



Figure 70 Shelves structure



Figure 71 Shelves with fabrics.

4th Designing “Stand lamp”

Objective

The design for additional elements of the first work was lack of the support in object arrangement in rituals.

Concept design

The design was divided into two parts: base and body of lamp. The appearance and shape of lamp base were applied from the characteristic of wood that was used to be a place for worship before farming. The lamp is about 80 centimeter height for floor illumination. The design of lamp body was inspired by the inside cross section of pine cone.

Functional

Illuminate

Materials

Lamp base used the small and slim wood covered by rattan palm. The lamp body used the white color of opaque acrylic sheet for soft illumination.

Related theory

The lamp can be used indoor and outdoor. The utility can be altered, stand or hang, related to contextualism which emphasized on context.

Conclusion and notification

The design of this work inspired form the wood with three prongs together with the shape of pine cone that provided the diverse characteristics of communication.

Keyword found:

Joint inspiration

Sketch idea

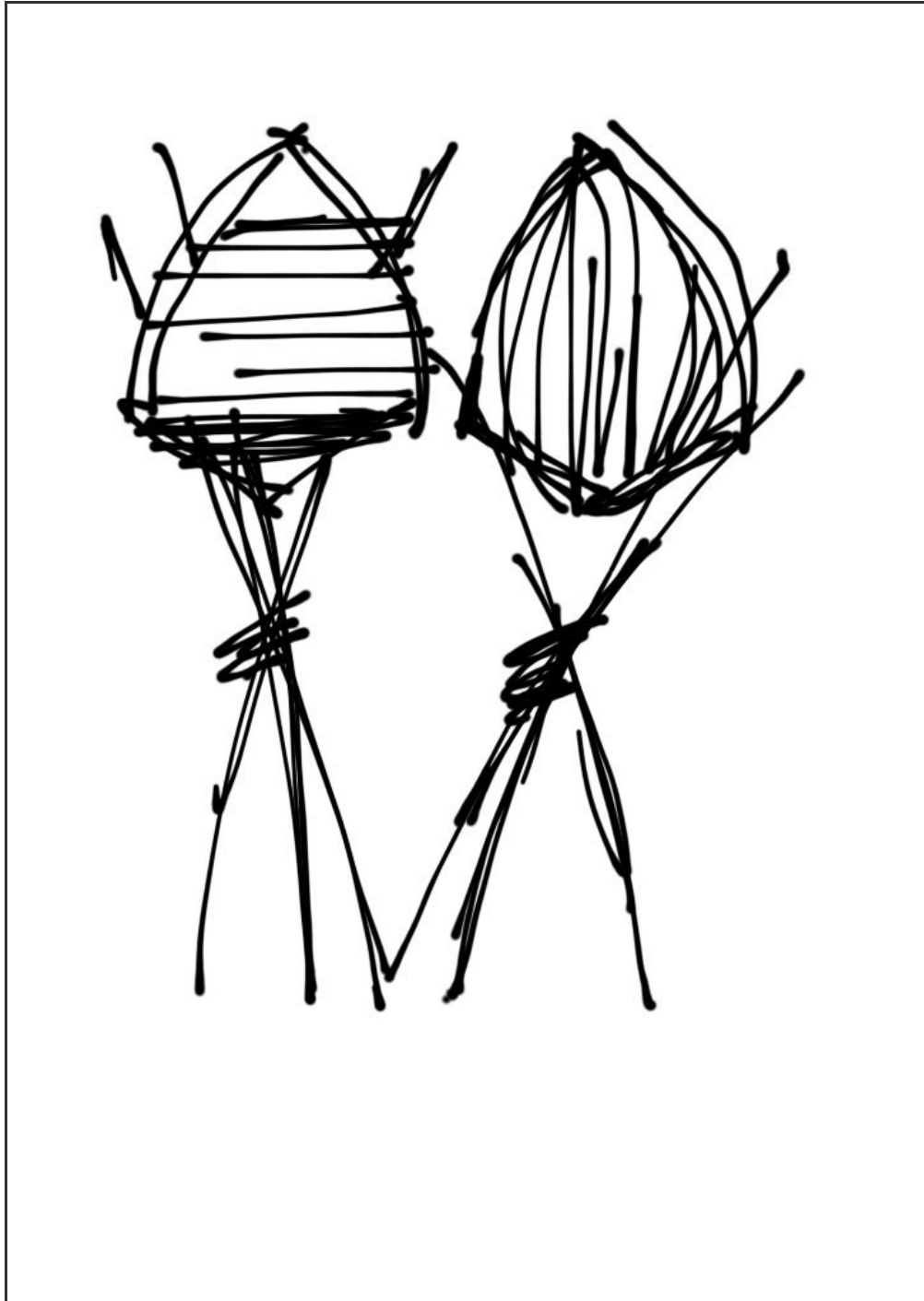


Figure 72 Sketch idea of “Stand lamp”

Designing



Figure 72 “Stand lamp”

5th Designing “Table 1”

Objective

The design for additional elements of the first work was lack of the support in object arrangement in rituals.

Concept design

The table was design based on the combination of 1st design and 3rd design as a round table. The table was added the plate at the core of table for light weight as well as emphasized the dimension of round table. Its legs used the horizontal frame of ellipse technique for the softness of overall shape.

Functional

Placing

Materials

The material of this work was divided into two parts, surface and legs. The surface of the table was placed by the mirror and weaved sedge which was the same as the 1st design. Table legs made of wood covered by rattan palm that was convenience in moving because the material was light and durable.

Related theory

Located on the concept design Contextualism focused, consistent with the surrounding context by using the material. The surface nature and that can be applied to a variety of areas.

Conclusion and notification

This design meets the utility and objective of using. The connection of previous design influenced the “harmony” of the design of each work and sense of environment.

Keyword found:

Harmony

Sketch idea

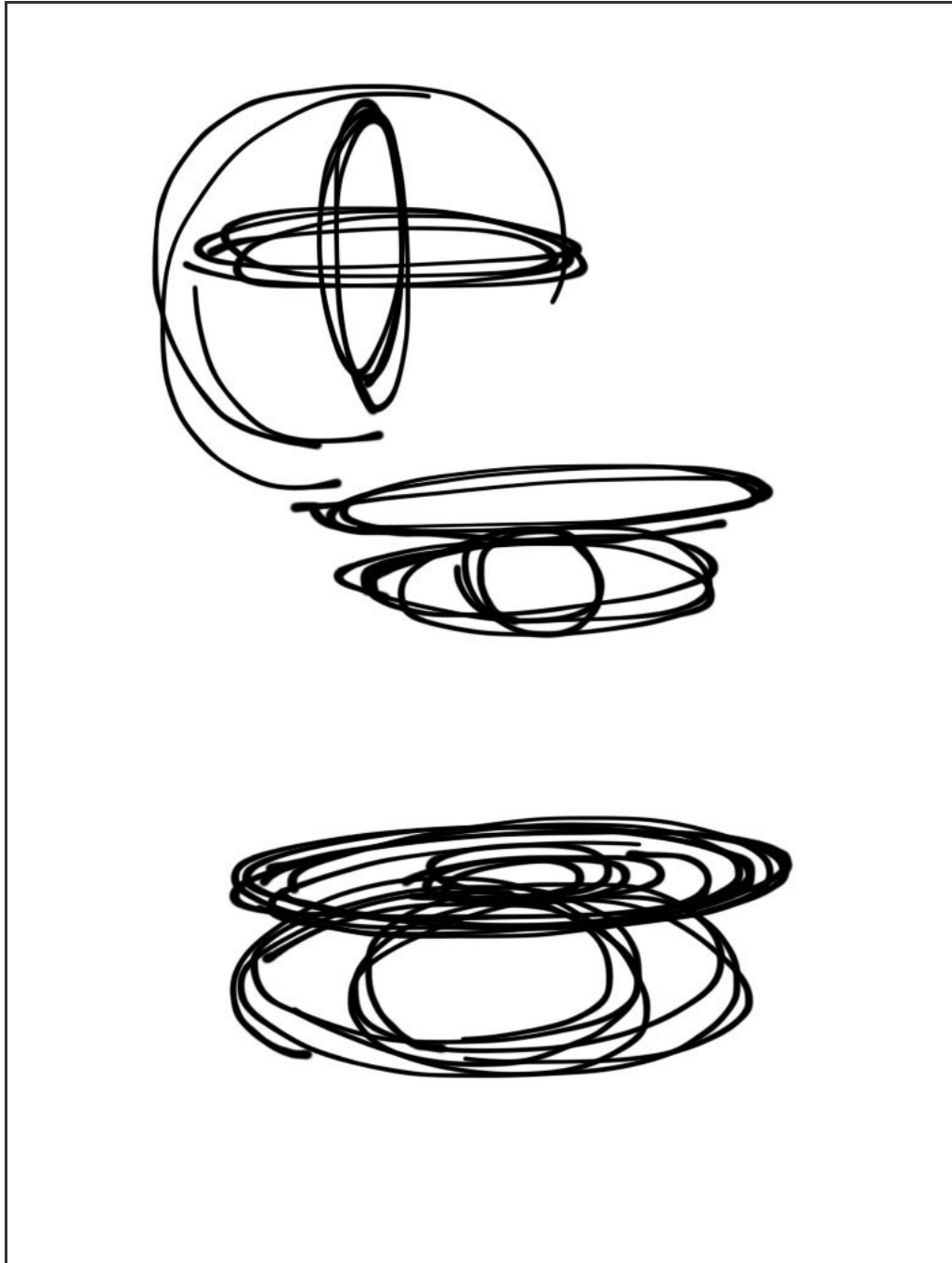


Figure 74 Sketch idea of “Table 1”

Designing



Figure 75 “Table 1”

6th Designing “Table 2”

Objective

The design for additional elements of the first work was lack of the support in object arrangement in rituals. This also employed previous technique.

Concept design

Table design was created from the same requirement of 5th design. On the contrary, this design was based on the view of the opposite side since previous work. The previous work contained lightness and high spontaneity. Therefore, this design seemed to be steady with the use of dark color that was obviously different to the others. The characteristic of 1st design was applied to this work. The mass was decreased by drilling the lined pattern of the table surface that gained more interesting.

Functional

Placing

Materials

Wood and mirror for the surface of table

Conclusion and notification

This piece of work is the work that may not seem interesting but on the other hand, the conflict of the opacity and carving. Pose interesting is indescribable, tons of shapes. Can support the utilization than other workpiece

Keyword found:

Mass and void

Sketch idea



Figure 76 Sketch idea of “Table 2”

Designing



Figure 77 “Table 2”

5. After design conclusion

After designing six works, it found that

1. To be more interesting, the design of shape development based on inspiration should study the outstanding and specification both abstract and concrete matters. Detailed the analysis of designing will benefit the best understanding of inspiration.

2. The design based on culture and tradition should not alter their way of life. The design will not meet the objective and that will distort social fact.

3. The concept and design techniques were similar to the previous data as well as the system management of new regulations. For example, the combination of different techniques from the same concept produced diverse works.

6. Design Evaluation

After designing, the works were evaluated by community. The processes were as follows:

1. Summarize the detail of each work

The summary of working process was completely described to inform community with clear understanding. The work seemed unfamiliar with people in community, the clarify information was needed.

Working group is important to inform the understandable knowledge and answer the question with mutual understanding. Some cannot communicate in Thai. So, there were local people or others who are able to speak Karen to help in building mutual understanding as research assistance.

2. Coordinate with Galayani Vadhana District for presentation and evaluation

This process is the preparation for the location of presentation and evaluation. Previous study mentioned that this community was quiet and peaceful. People go outside only on the ritual day. The study paid attention to the public space at the center of this community. The researcher then coordinated Watchan to request for the permission and that received a warm welcome from the abbot. The abbot also suggested about the period of the meeting between the head of community and government organization. This location and period of meeting were appropriated for evaluation.

3. Evaluated by community

There was one-day evaluation. The evaluation started on 9.00 am. at the temple court included the head of community, government officer, and locals. They are interested and paid attention on the evaluation. The event was conducted smoothly because of a well prepared. The evaluation gained a number of suggestions from participants.



Figure 78 Evaluate by community



Figure 79 Evaluate by community



Figure 80 Evaluate by community



Figure 81 Evaluate by community

4. Evaluate the designing in real environment

On the following day, all work was taken a photo at the real location.

The space was specified as follows:

Agricultural space



Figure 82 Evaluate by Agricultural space



Figure 83 Evaluate by Agricultural space

Pine tree space



Figure 84 Evaluate by Pine tree space



Figure 85 Evaluate by Pine tree space

Mountain space



Figure 86 Evaluate by Mountain space

Indoor space



Figure 87 Evaluate by Indoor space



Figure 88 Evaluate by Indoor space

From the evaluation to the real place and photos, we can see that overall all works are consistent with the nature in the area finance greatly. Because of

The characteristics of shape, was not against my right with the overall composition.

The color and texture of the target is in harmony with nature.

Flexibility in use. Independence per area, but respect the spirit of place.

5. Statistic conclusion

The designs were evaluated by Galayani Vadhana District. The result was show in the table.

Table 3 General overview of the assessment

DATA	No.	%	Note
1. Sex			
Man	34	60	
Woman	22	40	
2. Age			
Under 20	4	7	
21 – 40 Years	24	43	
41 – 60 Years	28	50	
Over 60	0	0	
3. Education			
Primary school	22	39	
High school	20	36	
Bachelor degree	14	25	
Master degree or over	0	0	
4. Status			
Agriculture	36	64	
Sales, Owner	6	11	
Not Working	4	7	
Government	0	0	
Others.....	10	18	

Table 4 Evaluation of the workpiece. “Mats”

Content	Satisfied						Not satisfied			
	Much		Moderated		Not much		Do not like		Unacceptable	
	No.	%	No.	%	No.	%	No.	%	No.	%
Mattress Function	30	55	22	39	2	3	2	3	0	0
Aesthetics	36	64	20	36	0	0	0	0	0	0
Identity representative	22	39	24	43	10	18	0	0	0	0

Table 5 Evaluation of the workpiece. “Den”

Content	Satisfied						Not satisfied			
	Much		Moderated		Not much		Do not like		Unacceptable	
	No.	%	No.	%	No.	%	No.	%	No.	%
Den Function	16	28	20	36	18	33	2	3	0	0
Aesthetics	14	25	30	53	10	19	0	0	2	3
Identity representative	16	28	16	28	20	36	2	3	2	3

Table 6 Evaluation of the workpiece. “Shelves”

Content	Satisfied						Not satisfied			
	Much		Moderated		Not much		Do not like		Unacceptable	
	No.	%	No.	%	No.	%	No.	%	No.	%
Home accessories Function	10	17	32	58	12	22	0	0	2	3
Aesthetics	26	47	24	43	4	7	0	0	2	3
Identity representative	18	32	18	32	16	30	2	3	2	3

Table 7 Evaluation of the workpiece. "Stand lamp"

Content	Satisfied						Not satisfied			
	Much		Moderated		Not much		Do not like		Unacceptable	
	No.	%	No.	%	No.	%	No.	%	No.	%
Lamp Function	20	36	30	54	4	7	0	0	2	3
Aesthetics	30	54	22	40	2	3	2	3	0	0
Identity representative	36	64	10	18	10	18	0	0	0	0

Table 8 Evaluation of the workpiece. "Table 1"

Content	Satisfied						Not satisfied			
	Much		Moderated		Not much		Do not like		Unacceptable	
	No.	%	No.	%	No.	%	No.	%	No.	%
Table I Function	32	57	20	36	4	7	0	0	0	0
Aesthetics	36	64	20	36	0	0	0	0	0	0
Identity representative	26	47	24	43	4	7	0	0	2	3

Table 9 Evaluation of the workpiece. "Table 2"

Content	Satisfied						Not satisfied			
	Much		Moderated		Not much		Do not like		Unacceptable	
	No.	%	No.	%	No.	%	No.	%	No.	%
Table II Function	28	50	28	50	0	0	0	0	0	0
Aesthetics	34	61	22	39	0	0	0	0	0	0
Identity representative	26	47	24	43	4	7	2	3	0	0

6. Descriptive conclusion

The talks and interview during the evaluation and after evaluation were explained as follows:

1. The design is beautiful and interesting if compared with the old works. There were some difficulties to identify the attractiveness of some works related to inspiration.

2. The use can be divided into two types: useable and unusable. For example, the design of table meets the usefulness. However, some of participants cannot identify the usefulness of the 3rd design.

3. It is possible to identify the community identity of Galayani Vadhana. The form or pattern inspired by other matter might be added.

4. Participant evaluated that the created works can be developed to be the product of community.

7. Design for the development of design knowledge

According to the study, design and evaluation methods, including pictures and the design community itself. The design concept can be developed further below.

Design conclusion

Design

Getting inspiration from the Pine Cone, and the various elements of the community. Specialised design that is consistent with the environment. Light, warm and simplicity.

Function

Designed with the flexibility to use both interior and exterior, including the grouping of functional diversity.

User

From local people to Capital city, The design can be fit in various society

Economy

The development of economically viable communities generate income during agricultural seasons.

Awareness of local wisdom.

Respect for what the community "have" and "be."

Designed to further knowledge.

All designs are the crystallization of ideas to achieve the aggregate work, reflection. Research of Princess Galyani Vadhana district areas that can be further developed the design. There is a way to express feelings. Touch with the different sensations, stimulate the thinking of the image of culture.

Ritual tradition.

The initial design from a summary of what the design work found that all six pieces.

Characteristics of specimens to answer with an on the ground, according to Karen's trajectory. There must be a wide range of flexibility in use. To demonstrate the spirit of the Pine Cone and Pine Cone, both physical, and feelings.

The procedure used to work with a Sketch and feasibility study on various aspects according to work and steps, as follows.



Sketch idea

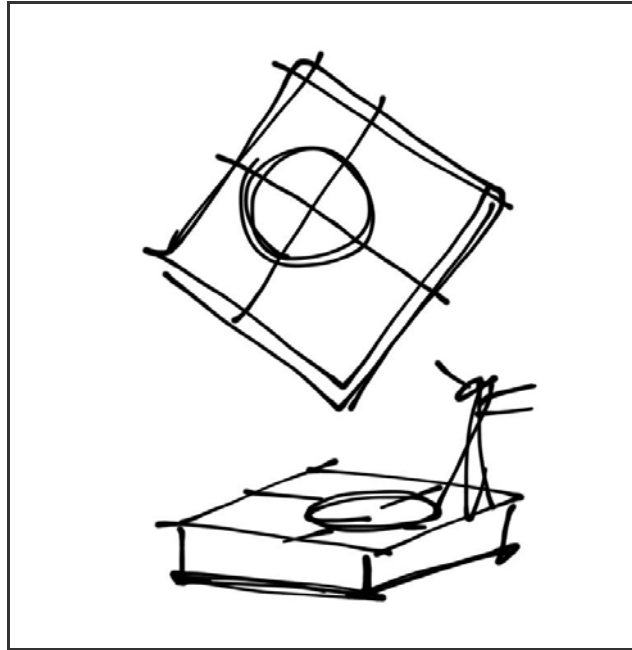


Figure 89 Sketch idea of “Smart table”

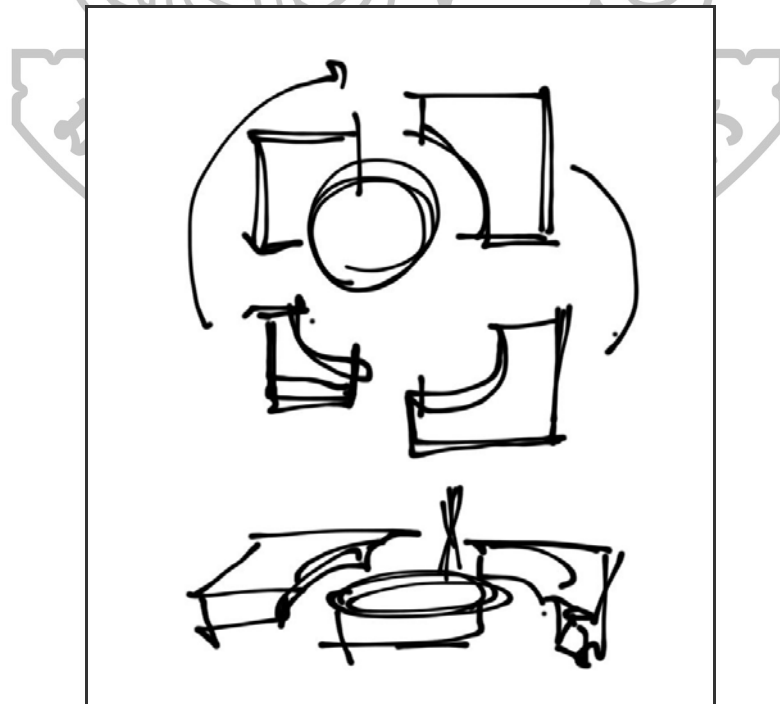


Figure 90 Sketch idea of “Smart table”

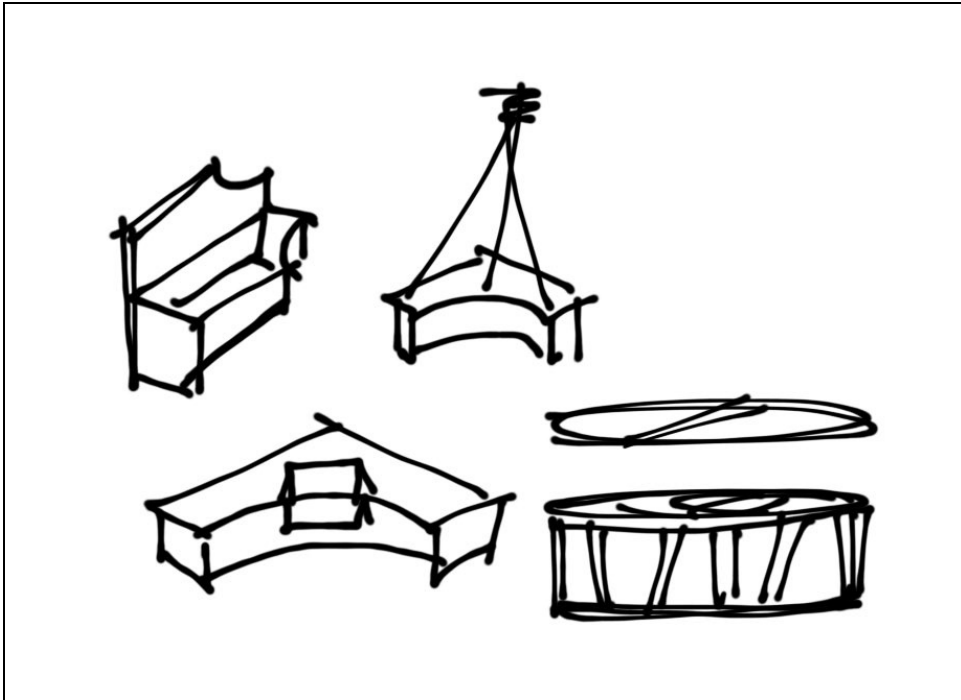


Figure 91 Sketch idea of "Smart table"

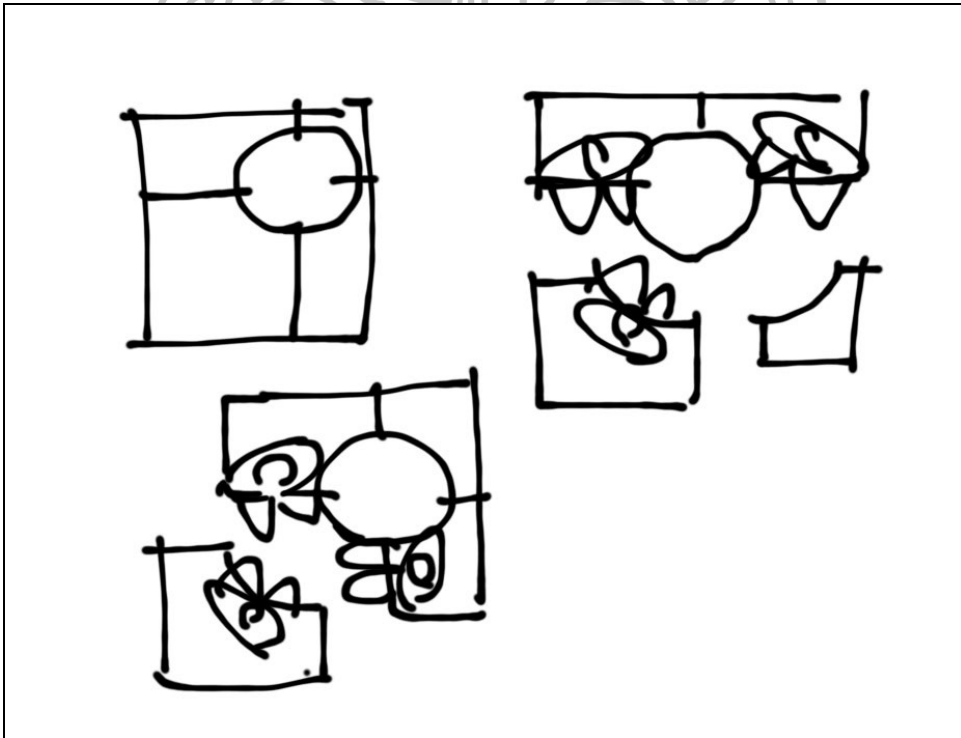


Figure 92 Sketch idea of "Smart table"

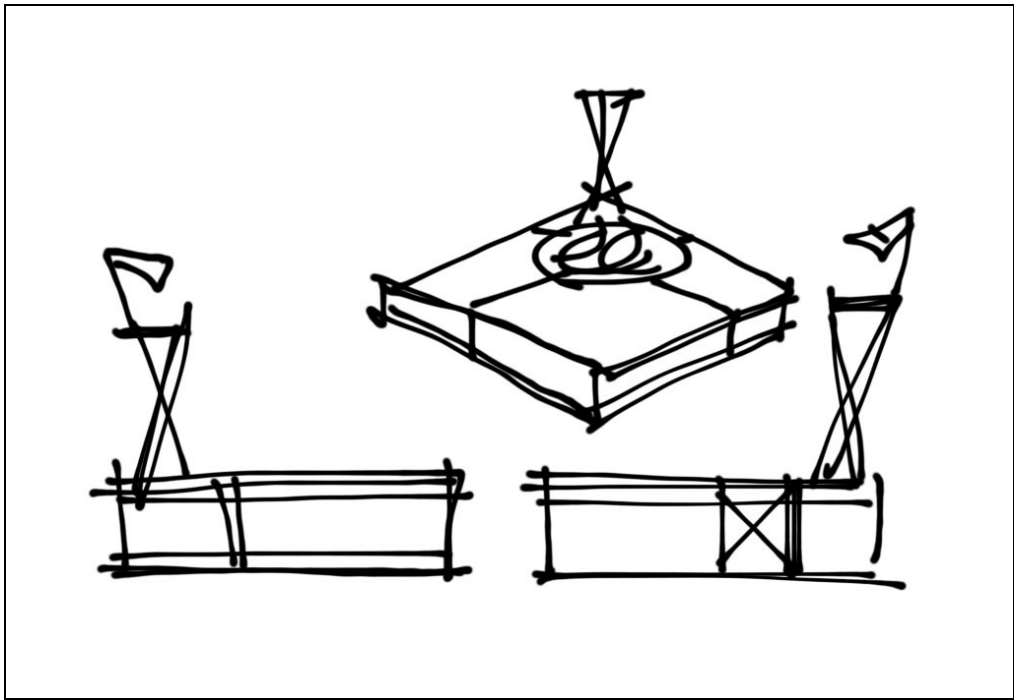


Figure 93 Sketch idea of "Smart table"

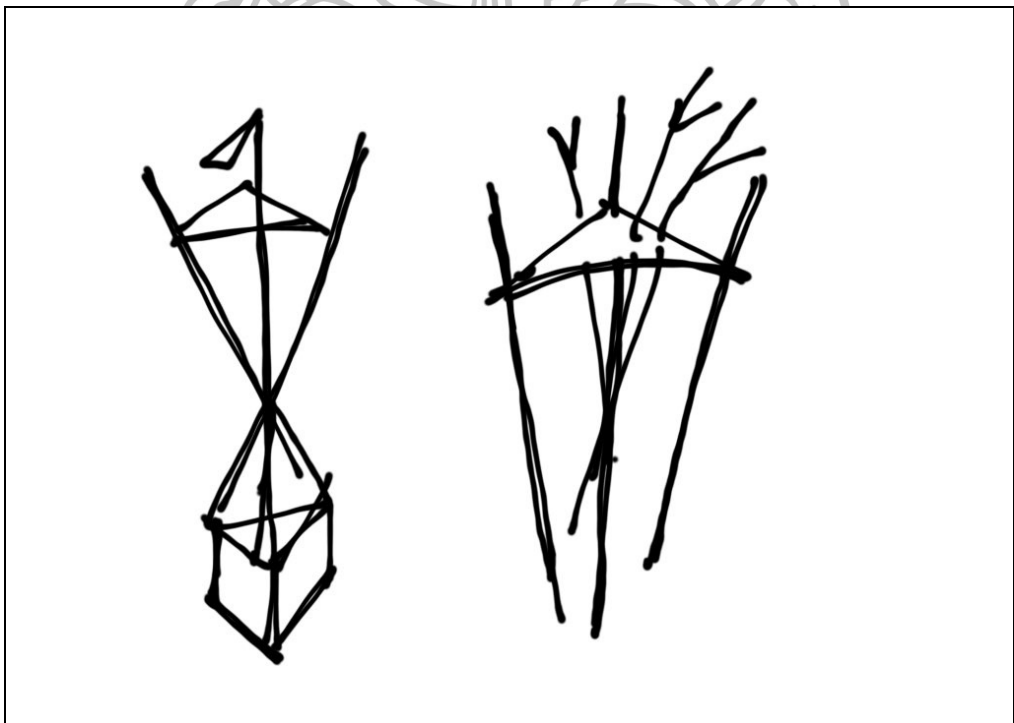


Figure 94 Sketch idea of "Smart table"

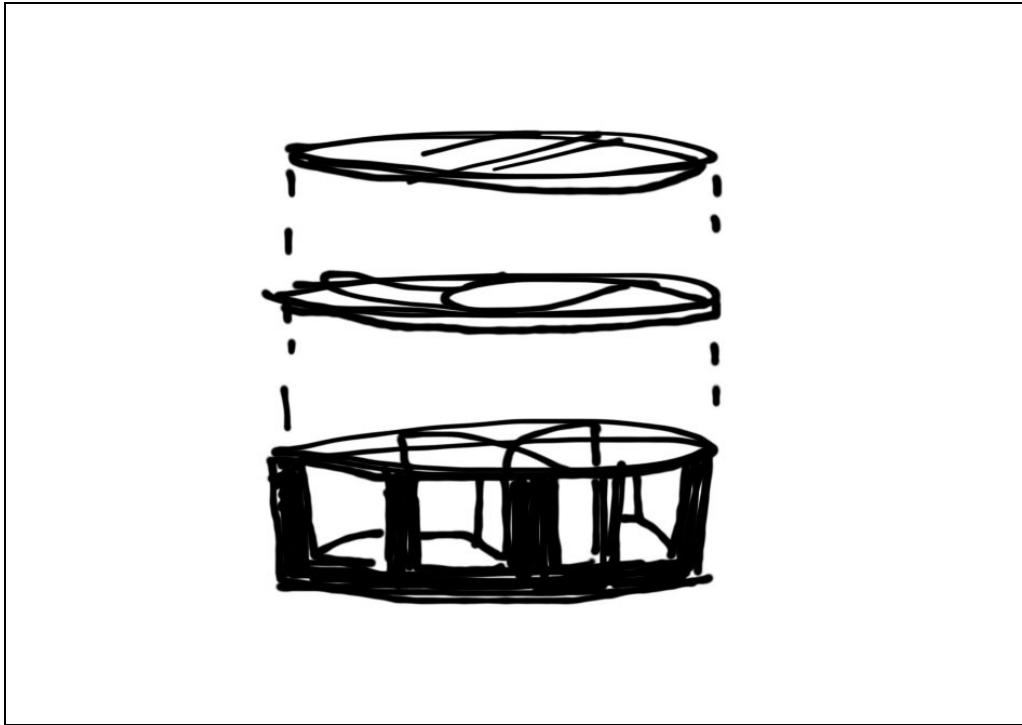


Figure 95 Sketch idea of “Smart table”

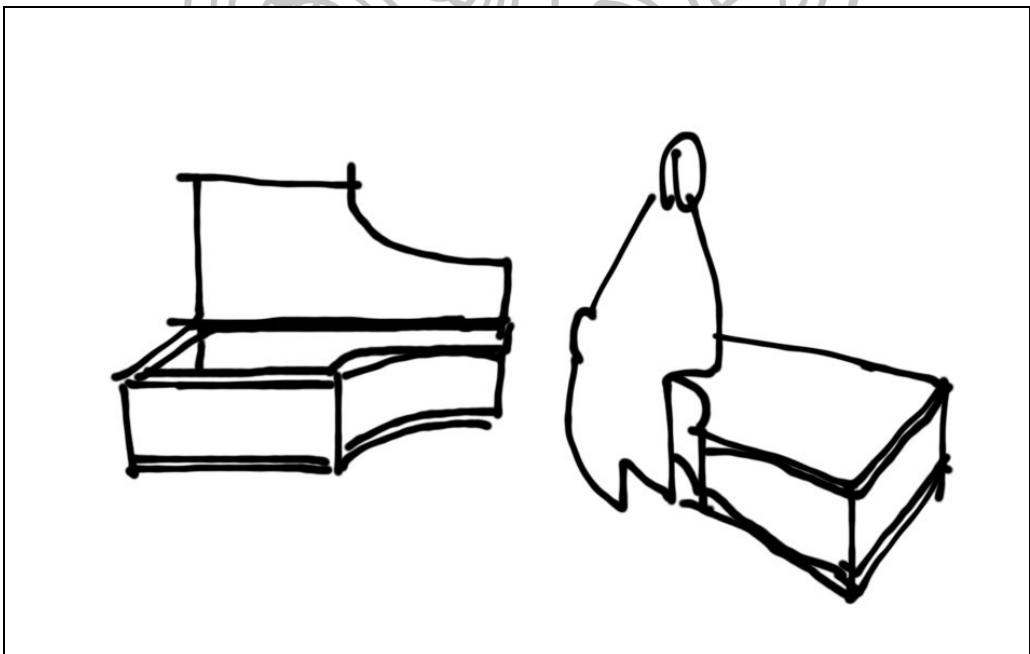


Figure 96 Sketch idea of “Smart table”



Figure 97 "Smart table"



Figure 98 "Smart table"



Figure 99 "Smart table"



Figure 100 "Smart table"



Figure 101 “Smart table”

Summary

The research results suggest that the environment, way of living and the culture in Galayani Vadhana district are harmoniously interwoven. The Karen perform as a guardian of the forest, the environment, traditions and rituals. Consequently, local wisdom becomes strong.

After developing a design and product, the researcher discovered spatial characteristics design that best represents the community should include two aspects; hidden physical identity, and local culture or rituals. Each community has its own concealed distinctive physical identity worth explored and studied. Meanwhile, local culture and rituals reveal the relationship between the community and other factors such as beliefs, agriculture and society.

The achieved product is a tool to convey unique identity and local wisdom of the specific area through its beauty and function. The image of the product should correspond to genuine characteristics of the community, as well as contemporary way of life in other places to accommodate a modern world we live in.

Design for all is the product of the experience. The inspiration of the designer and researcher. Including the passion in life is with the nature of northern Thailand, Reflection on the work of this design of human normal equal. Sitting, talking to a little social warm until a private space. With individuality most. Answer a way of Karen villagers of galayani vadhana district with the living beauty forever.



Chapter 5

Conclusion, Discussion And Recommendations

The research titled “Theory, Analysis and Design Development of Spatial Characteristics: Case Study of the Identity of Galayani Vadhana District, Chiang Mai” have three objectives 1) To explore Galayani Vadhana district with the objective to find characteristics of the district and inspiration for designing. 2) To develop and evaluate design process through recognition of the community. , and 3) To develop knowledge on designing for the community and concepts for development of spatial characteristics design.

The research implements qualitative approach based on a community, employing multiple concepts and theories to find answers to questions of the research. The research is divided into three parts 1) Development of tools for analysis of Galayani Vadhana district area 2) Development of the design process and design appraisal through recognition of the community, and 3) Synthesis to develop knowledge on designing for the community and concepts for development of spatial characteristics design

The research area is Galayani Vadhana district, Chiang Mai province.

1. Development of tools for analysis of Galayani Vadhana district area

Findings received during the process of developing the tools to find characteristics that represent Galayani Vadhana can be described as follows:

1. Field study

In conducting the field study, especially at the area where there is strong cultural presence, it is important that the researcher visits the site at least 3 – 5 times early in the process to adjust the outlook. Frequent visit is particularly crucial if the area can be influenced by changeable factors; for instance, seasons and festivals may change the atmosphere of the area and mood of people and the

community. By witnessing the community in various dimensions, the researcher has rounded scope of information to synthesize and form the concept.

2. Positive relationship with residents in the area

Without good relationship with residents in the area, the researcher is merely a data collector. If good relationship with residents from different status in that community is formed, the researcher is allowed to find out various thoughts and attitudes toward the research, or receive suggestions in working with the community. The researcher of this study personally has made many friends, which has become beneficial for a research that requires continuous work.

3. Outlook of the community

Variety

The community is located in the area where natural environment is not damaged. However, the community continuously develops. Therefore, people try to adapt to the environment and changes they are facing.

Wholeness

People, the way of living, culture, tradition, environment and thoughts are integrated in the community. The community values status of the whole community higher than that of an individual.

4. Applying creativity to build upon

The information collected from field study is both diverse and repetitious. Thus, when selecting information to develop spatial characteristics, it is important to be creative in order to get information that provides interesting views or reflects the identity of the area.

Literature review, study of data from collected from field work and conversations with people in the community make the researcher realize that the Pgaz K'Nyau living in Galayani Vadhana district love and have pride in their homeland. They are particularly cherish the pine forest, which is the location of the fountainhead. It is the place where culture, tradition, wisdom and beliefs have coexisted for a long time.

In the researcher's opinion, the pine forest is the most tangible physical element and can be used to represent the area easily. Therefore, the researcher question what are factors that maintain the forest until now.

A pinecone is product of growth and biological propagation. It also represents the sustainable growth of Wat Chan Pine Forest. The forest-related rituals that the villages perform are a tool to conserve the forest. According to Karen's beliefs, a forest is their home from the day a person was born until his death. Therefore, a pinecone can be adopted as a symbol of sustainable growth of Galayani Vadhana district.

The tool for data analysis is experiences and interaction with individuals and the community that enhances an insight on thoughts, outlook and identity of the community. The ideas generated from this process is built upon the perspectives of the community to add value to the ideas before developing a design.

2. Analysis of the design process and design appraisal through recognition of the community

This process consists of two parts: design development and design appraisal through recognition of the community

1. Design development comprises six steps as follows:

Step 1: Analyze an inspiration and creation

After determining that a pinecone is to symbolically represent the area, the designer study the cone in designing perspectives such as the shape, form or outstanding features. The characteristics can be summarized as follows

- 1 Round: A physical characteristic when looking at the cone from top view
- 2 Spiral: The shape of the seed scales signifies changes
- 3 Axis: The axis is the center of scale distribution

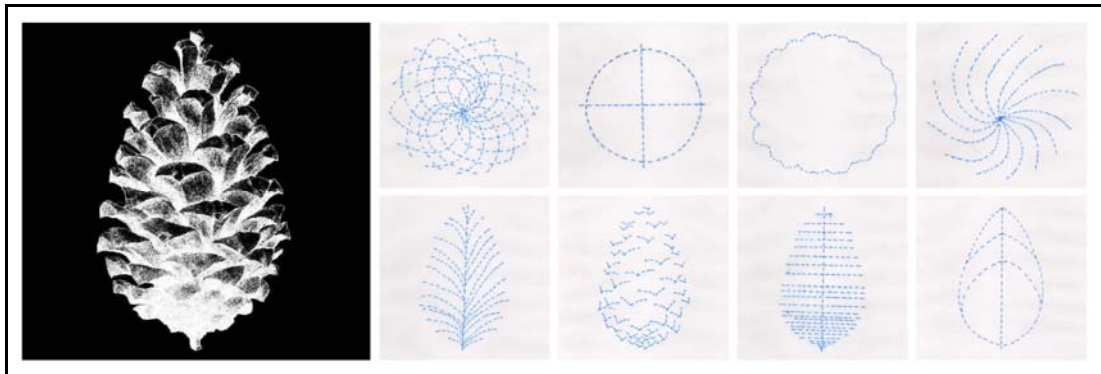


Figure 102 Analyze the pine cone.

Step 2: Analyze context and relationship

At Galayani Vadhana district, rituals are the center linking human with the forest, folk wisdom and way of living. The Karen people perform different rituals throughout the year. Behavioral study reveals that during the ceremony, attendants sit on the floor or a mat. The ceremonies are performed in the house, on the porch or outdoor at the border of the forest or at planting fields. How and where attendants sit depends on contexts of the rituals such as formality of the ceremonies and the hosts. The relationship between people and rituals is flexible and adjustable.



Figure 103 Ritual of Galayani Vadhana district.

Step 3: Analyze sketch idea

Sketching idea begins by devising coarse ideas about the product and develop a pattern that can be applied to various functions and suitable with behaviors of ritual attendants. This step yielded six sketches as follows:

1st design: Mats

The objective of this design is to respond to behaviors of ritual participants. The mat is designed to be multifunctional so it can accommodate different activities in the ceremonies. Connecting several mats enables utilization flexibility.



Figure 104 Designing Mats

2nd design: Den

The 3-dimensional concept is applied to develop this design. It is built on the first design. The purpose is to develop a shape that support the Organic and Geometry concept. The inspiration is a resting place the Karen use when they go into the forest and when traveling on foot between communities.



Figure 105 Designing Den

3rd design: Shelves

The third design is developed based on frame system and the conflict of frames to create new space. It is an effort to break out of the main concept that involves circles. This design is an alternative.



Figure 106 Designing Shelves

4th design: Stand lamp

This design emphasizes function. The rituals may involve certain period of time, so a furniture that gives out light can be useful. The stand lamp is transformable into a hanging lamp. Also, the light bulb can be replaced with candle.



Figure 107 Designing Stand lamp

5th design: Table 1

The fifth design seeks to answer “wholeness” of behaviors during the rituals. Previous designs focus on sitting and standing; however, a table is necessary to put offerings and utilities on. So, this design respond to that requirement.



Figure 108 Designing Table 1

6th design: Table 2

The design traces back to the model characteristics defined in earlier process in order to explore the overall relation of designs. The presence of model characteristics seem to be absent from latter designs. This design revisits the original concept.



Figure 109 Designing Table 2

Step 4: Analyze function and look

Main users should be a key factor in determining functional composition of the project. Product function should accommodate activities of target users. It should support activities and rituals. The product should be functional. Also, function and composition should integrate smoothly.

Defining aesthetic composition

1. Shape and style: Shape and style reflect the ideas behind the design. The use of a circle represents the harmony of function and the environment, as well as the flexibility to accommodate several rituals the community regularly hold.

2. Rhythm, order and proportion: Rhythm, order and proportion that illustrate the relation between pieces of work and the surrounding environment not only create the movement of design, but also answer the concept of space and interior and exterior proportion. Behavioral components and activities in the rituals are adapted to create the rhythm and space to achieve aesthetics as intended.

3. Image, characteristics and quality of space: These are components that should be applied to compare with target group. They affect design and space that serves each function. Different characteristics of users in each ritual and activity affect the behaviors of users.

Step 5: Analyze the design process through recognition of the community

All designs were appraised by people in the community on the day of the community leaders and representatives meeting at Wat Chan to stimulate exchange of opinions and ideas on the designs and development of spatial characteristics. The results are as follows:

Overall, community residents were highly satisfied with the developed shape of furniture inspired by a small pinecone. They suggested that they might make use of the time after harvesting season to build the furniture as an attempt to create the identity of their community. The community leaders, villagers and government officials also agreed with the idea.

As for opinions on function, some villagers were not familiar with the style or the look of the furniture, so they were not confident about function. However, they were happy that there were new changes.

Results can be presented by percentage as follows:

Impression on function, by order of most impressed to least impressed

First: Design#5

Second: Design#1

Third: Design#6

Fourth: Design#4

Fifth: Design#2

Sixth: Design#3



Figure 110 Table 1's Impression on function

Impression on aesthetics, by order of most impressed to least impressed

First: Design#1

Second: Design#5

Third: Design#6

Fourth: Design#4

Fifth: Design#3

Sixth: Design#2



Figure 111 Mats' Impression on aesthetics

Impression on being identity of Galayani Vadhana district, by order of most impressed to least impressed

First: Design#4

Second: Design#5

Third: Design#6

Fourth: Design#1

Fifth: Design#3

Sixth: Design#2



Figure 112 Stand lamp's Impression on being identity of Galayani Vadhana district

In conclusion, for function, residents of Galayani Vadhana district give priority to function concerning posture, such as sitting and standing, that serves the purpose directly and clearly. For form, most prefer the line imitating pinecone and circle shape since these are easy to understand and create simple shape. As for being identity of Galayani Vadhana district, freestanding and mass forms have an impact on perception of people.

Step 6: Analyze the process to improve on knowledge on design

Analysis of six designs and appraisal by the community revealed the characteristics and information pertaining development of design that should be summarized as knowledge.

Inspiration

A pinecone from the pine forest at Galayani Vadhana district represents sustainable growth. It symbolizes coexistence between pine forest and the Pgaz K'Nyau at Galayani Vadhana district.

Function

Users may sit on a floor and work on the table. The table can double as a stool or be a storage. Several items can be applied to work together. For example, putting mats on the table turning it into an ottoman to sit on while reading a book with light from the lamp.

Design concept

S.M. (ART) comprises three main concepts

S-Simplified:

The simple design reflects the way of living of people in the area. Shape of products send a message that is easy to understand about simple life, function and a hint that life should be humble and simple. To follow the practice of the Karen, we can begin by perform self-assess and ask these questions; what are our real need?, what do we actually want to do?, what are unnecessary to us?, what are activities we do not really want to do?, what are things we never use or do not want it any longer?



Figure 113 The SM[art] table

M-Multitudinous:

The variety in function of the works is developed from the property of pinecone that expands and shrinks with time. This characteristic is adapted into different functions to answer diverse behaviors and activities. The products can be applied to sit on, light the room, work or turn into a storage.

ART

Artistic design is applied to combine the use of form, and organic and geometric shapes to create tangible harmony.

Image

The simplicity of the shape, the contrast of square and circle, cluster, distribution and connection are applied. The pattern of pinecone draws attention.

Determining users

The designs are compatible with lifestyle of people in the city or those who live in limited space such as a condominium or an apartment.

Material and installation

The texture is mostly woody. The combination of the brown color of cone scale and black, which is a neutral color that matches every space according to color theory, makes the designs complement everywhere it is put. This property answers the lifestyle of urban citizen.

Do-It-Yourself

The project has the Do-It-Yourself concept. The function and user behaviors make how to manage each product and the overall relation of each piece interesting.

3. Synthesis to develop knowledge on designing for the community and concepts for development of spatial characteristics design

Summary of design

Design

Design was inspired by pinecone and the variety of components of rituals. Design that emphasizes on coexistence with nature gives an impression of warmth and simplicity.

Function

Design emphasizes on diversity so the product can be used at many places, and the function can be transformed in several dimensions.

User

Users can be anyone, from residents of Galayani Vadhana district to people in Bangkok. The design focuses on the essence of living; therefore, it can accommodate people in many segments.

Economy

Design can be developed into products made by the community. Since the community relies on agriculture, the residents may collaborate to manufacture the products during their free time.

Awareness of local wisdom.

Awareness of local wisdom that shapes characteristic of the community is essential in design for the community since the designer is an outsider. If the “truth” of the community is altered, the meaning, significance and essence of the design will change.

4. Discussion

Results of the research titled “Theory, Analysis and Design Development of Spatial Characteristics: Case Study of the Identity of Galayani Vadhana District, Chiang Mai” can be discussed by following issues

1. Essence of Galayani Vadhana district

Including

Spirit of connectivity

The Karen people highly respect each other. They respect the elders and look after less fortunate people. This shows the spirit of connectivity at personal and family levels. Beliefs about ghosts and spirits are formed for psychological stability. The supernatural guardian of the forest concept and the bond between the Pgaz K’Nyau and natural environment are developed because their lives involve the forest from birth to death. The “seven layers of forest” concept portrays the significance of the forest in the life of Karen people.

Spirit of Border

The spirit of identity is strong. The Karen value importance of group. There is a sense of space arisen from sharing the area with nature. They allow sufficient boundary for living, from daily life, agriculture to space share by the entire community. For example, a temple field is used as gathering area and arena for entertainment. Space for rituals can be anywhere from inside the house to in a forest, depending on context of the activities and rituals.

Spirit of texture

Texture not only holds aesthetic value, but also reflects distinctive identity. Visual perception can stimulate decision. Galayani Vadhana's texture looks coarse but warm, making it surprisingly charming.

2. Local wisdom about culture and ritual of the Pꝋaz K'Nyau can be applied to design. Wisdom about culture and ritual of the Karen is specific and unique, yet it can be adapted into modernity. Since Karen's wisdom is based on normalness without much pretense, it is easy to study and develop into modern designs. If unnecessary subjects are taken out of modern life, what remains is the fundamental way of living.

3. Development of tools to identify characteristics of a community

Access to the community is crucial for a study that bases on a community or area where the community is located. Appropriate tools allow the researcher or designer to access quality and useful information that can be applied to develop the project. This research discovers that direct experience of the researcher in the area, together with visit to the community in natural manners and expressing status that others can easily understand are factors that enable the researcher to receive warm welcome and have good conversation with the community. By applying creativity to the information gained from the field, new ideas may emerge from plain answers.

4. Design bases on relationship between communities in wholeness perspective

Designs developed for this study are results of a relationship according to wholeness perspective. Every dimension is considered. The inseparable

relationship between people, the environment, wisdom and beliefs makes holism concept tangible. All six designs portray that quality. Nothing is taken out. Everything is integrated so even small component maintains its significance.

5. Creating form, shape, structure and design that are humble to the environment

Being humble to the nature is necessary for design within local community or natural environment since a striking design may disrupt state of the community without sending a clear message. An attempt to explain the meaning of out-of-place design may conflict with the truth of the area, particularly in highly natural environment. Organization of form, shape and structure should reflect physical properties of the area or particular characteristics of the community that produce outstanding feature. At Galayani Vadhana district, the humble design receive more recognition from people in the area even though they agree that the creation does not blend well with nature.

6. Communication with people outside the community through designs that reflect the life, culture and rituals

Design is like a communication tool, allowing the outsiders to know us more. In the Postmodern world we live in, everything can be adapted to a communication tool. Likewise, designing can perform this role, particularly design work that communicate directly with people from outside or tourists before they enter the area. They can learn about the area through design. Incorporating tradition and rituals in design products gives an opportunity to tell stories through experiment, utilization, sight and touch.

5. Conclusion

5.1 Spirit of Place

5.1.1 The name “Galayani Vadhana”

Though Princess Galayani Vadhana had deceased since 2008, people in Thailand still remember and associate her with hard work and her commitment to the Prostheses Foundation, which was founded by HRH Princess Mother. The foundation aims to provide prostheses to the underprivileged citizen.

Princess Galayani Vadhana continued the mission of HRH Princess Mother in regularly visiting people in rural areas of the country, bringing with her a team of volunteer medical personnel to treat those who did not have access to healthcare. The Princess appeared calm, elegant, graceful, beautiful and dedicated to help people. Her visits not only brought morale to people in remote areas, but also made their quality of life better. The name of the district reflects serenity and beauty of the place, similar to the image of Princess Galayani Vadhana.

5.1.2 “Geography and environment”

Galayani Vadhana district is located in a valley at high altitude. Thus, access to most areas is difficult. The charming pine forest there is possibly the most well-preserved one in Thailand. Geography of the district is a barrier that protects the place from outsiders and helps sustain the headspring forest, which then nurtures other nearby areas.

5.1.3 “Spirit of culture and ritual”

The findings that the author gathered from literature review as well as observation and participation in a community of the Karen people living in Galayani Vadhana district during field study suggest that the Karen strongly uphold to their unique traditions. Tradition and rituals are an anchor of every family in the community. The Karen’s rituals are a medium conveying their beliefs that are firmly arisen from the bond with the environment.

5.1.4 “Personal Feeling”

The sky and the sound from the mountains in Northern Thailand always makes the author feel calm and relaxed during every trip to the region. The feelings are particularly overwhelmed at Galayani Vadhana district. The place is extremely scenic and peaceful. It gives visitors the sense of being isolated from chaos of the society.

5.2 Inspiration

5.2.1 “Inspiration in design”

The inspiration for design comes from pine trees and pine forest in Galayani Vadhana district. The researcher intends to transfer the information gathered from interviews and observation into visible and tangible object,

representing the pine forest and the environment in the area. The pinecones symbolize sustainable growth of the forest and the district as cones are the product of a stage in the life cycle of pine trees. The designer focuses on translating the shape and certain characteristics of the cones to aesthetic object that provides various functions.

5.2.2 “Design development”

The focus of design development was on characteristics of circle and oval shapes to represent the distinguished characteristics of pinecones. Cultural context was an integral part of the design. During the rituals, the Karen people sit on the floor as a group. The rites are performed both indoor and in natural environment. The design incorporates these factors through linkage of shapes deconstructed from pinecones. The essence of the design is beauty, stability and peace, which is consistent with natural environment in Galayani Vadhana district.

5.3 Discussing for the Master Piece

The piece of work called “The SM [art] table” is the outcome of crystallized thought. It is an experimental design based on simplicity, a variety of function and aesthetic value.

Simplicity: The researcher aims to create ease of use and simple appearance by making use of basic shapes that are easy to comprehend such as rectangle and circle. The color scheme of the master piece follows the simplicity theme. Brown and black colors signify nature and contemporary style of art.

Versatility: The product offers a variety of applications, either as a single piece or in group, for both work and leisure. It can serve as a storage or exhibition case due to design of the shape that is developed to provide consistent distribution of work space in every dimension.

Aesthetic value: The beauty of a pure form, proportion and layout of the product creates aesthetic value and makes it interesting. The context of method of application may cause the value to change. The charm of the work arises from user participation at any given time.

5.3.1 Chanoness

Chanonness, the attribute that represents the designer, is simplicity of thoughts and expression developed from a slow, deliberate and lucid thinking process. It is demonstrated through simplicity of the shape of the product. The harmonious coexistence of humbleness and the environment is reflected through size and shape of the product. Despite constant changes of dynamic society, Chanonness is adaptable to every environment and context.

The framework of the concept is as follows:

Single core idea: The focus is on a particular objective. The content, details and different dimensions of the subject are thoroughly studied. Value-added: A value-added complements the product. It must be in moderation so it does not distort the purpose of the product. It is essential that the added value is based on the originality of the work as the researcher believes that originality has its own values. It is the responsibility of the designer to present the existing values in appropriate perspectives, time and method so the product remains timeless.

5.4 Related works and theories.

The design concepts can be explained in comparison with other notable pieces of work and concepts as follows:

The concepts of Frank Gehrey's work

The author share similar concept with Frank Gehrey in the following aspects:

Line/curve: Frank Gehrey creatively uses curves and the flow of freeform shapes that look like digits. His works have become architectural sculpture and a living space that provide the context to the cities they are located in. Likewise, the author focuses on the use of curves or elements of a circle achieved from deconstruction of a pinecone's shape and form instead of adopting the original shape. The design features sleekness and opacity with a touch of transparency and lightness.

Few colors: The author's design uses minimal colors. The objective is to emphasize on pure beauty of the shapes and forms so the essence of shapes becomes an outstanding feature.

Structure as an art: The design accentuates on beauty of the product to make it worth more than a strong, weight-bearing structure. Natural beauty is applied to increase the value of the product as a piece of art.

In the process of designing the Guggenheim Museum at Bilbao in Spain, Frank Gehrey took the context of environment, community and people who live in the area into consideration. He discussed with the locals about their ideas and requirements. They told him what they think does not matter, and asked that Gehrey do as he wished.

The Guggenheim Museum is the place where the artist and the residents of Bilbao express their ideas on space and the structure. It is much more challenging than general white-walled art galleries. It is said that more people travel to Bilbao with the intention to see the structure designed by Gehrey than to see the art installations inside the museum, although that it not Gehrey's intention.

Similarly, the author's concept of spatial characteristics design may look out of place or subtly related to the identity of the community. However, it makes members of the community puzzled and excited. This design takes a leap in defining identity of a community by depicting tradition and rituals aspects. This concept offers a new approach for spatial characteristics design.

The concepts of Clive Bell's works can explain the Formalism concept that involves visual element (form is important than matter) as follows:

The term "significant form" includes combinations of lines and colors. Both elements exist uniformly. They create stop and motion at the same time, depending on the context in which the action occurs. The value of the work varies by interpretation and behavioral responses. In the author's design, the shape is simple. It can serve a variety of activities. It was designed to enhance flexibility of interpretation in various dimensions. The combination of shapes allows different application and adjustment to respond to changes at any time.

6. Recommendations

Recommendations on community development

1. A community should document their culture and rituals in compliant with conditions that change with social development by giving priority to value of the relationship between people, environment, wisdom and beliefs so later generations have pride in their heritage and improve on it.

2. A community should encourage participation of various groups to receive broad ideas about design for the community.

Recommendations on spreading knowledge in education institution

1. Education institution should consider providing courses on analysis of the community's tradition and culture value to spread the knowledge, so students understand its significance and have a basis to their work build upon.

2. Education institute should arrange for teachers or community leaders who have broad knowledge about wisdom of the community to educate students, both at the institute and at the community.

3. Courses about conservation of local culture should be provided at schools and universities in the region so that the knowledge spreads across the region in more concrete manner. In addition, providing the knowledge as a course or lesson in education institution enables exchanging of opinions that may initiate new study.

7. Suggestions for future study

This research has very broad scope of work. Therefore, future study may drill down to several smaller areas and compare data collected from every site, or categorize data methodically to achieve more detailed research.

As for design research, operational definition must be clearly established. Without clearly defined parameters, a design concept may be too wide, leading to time wasting.

References

- Anomasiri, V., Burapacheep, P., and Jaihar, N. (1998). **Tribal the conservation of natural resources, forests and water.** Bangkok: Fund research.
- Apawatcharuch Jaroenmeung, D. (2002). **Sustainable Cities: Concept and Experience of the West.** Social research institute, ChiangMai University.
- Baird, G. (1995). **The space of appearance.** The MIT Press, Cambridge Massachusetts.
- Barthes, L. (2004). **Mythologies.** Bangkok: Kob-Fai printing.
- _____. (2001). **Geography and way of life in Thailand.** Bangkok: Princes Maha Chakra Sirindorn Anthropology Centre.
- Boonchaiwattana, P. (1998). **Concept design.** Faculty of Architecture, King's Monkut Institue Technology, Ladkrabang.
- Brolin, B. C. (2013). **The failure of modern architecture.** Bangkok: Kledthai.
- Brief of Amphoe Galayani Vadhana.** Administration department, Amphoe Galayani Vadhana, ChiangMai.
- Buadang, K. (2003). **Ethnic identity and religious change. Case of Karen people in Thailand and Myanmar.** Bangkok: Office of the National Culture Commission.
- Casanova, H., and Hernandez, J. (2014). **Public space acupuncture.** New York: Actar Publication.
- Chotpradit, T. (2010). **Pra-Kod-Karn-Ni-Tad-Sa-Karn.** Bangkok: Summed publishing.
- Cresswell, John. W., and Plano Clark, V.L., (2007) **Designing and conducting Mixed Methods Research.** SAGE Publications.
- Dickie, G. **Aesthetics An Introduction.**
- Foster Gage, M. (2011). **Aesthetic theory Essential Texts for Architecture and Design.** New York and London: W.W. Norton and Company,
- Gehl, J. (2013). **Life between building.** Bangkok: Li-Zenn Publishing.
- Glaser,Barney G., and Strauss,Anselm L. (1967). **The Discovery Grounded Theory : Strategies for Qualitative Research.** Aldine.
- Gomutrattananon, J. (1996). **What is Art.** Bangkok: Ton-Or Grammy.

- Hiranyawong, T. (2003). "Relay ecological wisdom of Karen. In Doi Inthanon National Park." Master's degree thesis, Major human and environment management, Chiang-Mai University.
- Hubbard, P., Kitchin, R., Valentine, G. (2004). **Key thinkers on space and place**. London: SAGE publication.
- Isara-Sena-Na-Ayutthaya, P.Dr., **Design Process**. Faculty of Architecture, Chulalongkorn University.
- Jadranirot, N. (2010). **Community Identities**. Songkhla: Namsin Kosana,
- jantawanich, S. (2010). **Sociology theory**. Chulalongkorn University Publishing, Bangkok.
- Jantanapoti, S. (1999). **Karen tribal**. Nonthaburi: Tamkeaw printing.
- Jeungsatiansub, G., Tengrang, K., Pinkeaw, R., and Petchkong, V. (2009). **Way of community**. Nonthaburi: Research social and community.
- Kamkeaw, V.Assoc. **Aesthetics**. Bangkok: PS Print.
- Kamma, T. (2003). "The existence of the Karen Christian spiritualism." Master's degree thesis, Chiang-Mai University.
- Kampolgoon, T. (2004). **Shifting Cultivation in the life cycle of Karen**. Chiang-Mai: Kongboonkhao network,
- Kampolkul, T. (2004). **Shifting cultivation in life cycle of Karen**. ChiangMai: BSD Publishing,
- Kitiasa, P. (2004). **Localism**. Research fund for research in anthropology, Bangkok.
- Lawson, B. (2005). **The language of space**. MA, Architectural press.
- Leesuwan, V. (2003). **Folk Art**. Bangkok: Amarin Printing.
- Leungaramsri, P. (1996). **Indigenous ecological knowledge, Case study Karen in Thung Yai Naresuan forest**. Bangkok: Life and nature restoration projects.
- Lucas, R. (2016). **Research Methods for Architecture**. London: Laurence King Publishing,
- Marod, D. (2012). **Applies forest ecology**. Bangkok: Kasetsart University Printing.
- Nartsupa, C. (2010). **Modernism and concept of community**. Nonthaburi: Sang-san publishing.
- Ongsurak, C. Assoc. **Arts : Space Aesthetics and Happiness**. Bangkok.
- Panyawat, A. (2005). "The study of Multiculturalism community: From the field study." The project of building a learning community happiness, Bangkok.

- Pasutarachart, P. (2009). **Holism**. Bangkok: Kledthai.
- Pornrunroj, C. (2000). **Research in Arts**. Bangkok: Chulalongkorn University Publishing.
- Promsao, K., Silarak, B. (1999). **Par-Jed-Chan: Pan-Ya-Prad**. Bangkok: Amarin book center.
- Potiwat, K., Team's (2005). "Leaders for changing in primary school.: The studies for grounded theory." Thesis in doctor of philosophy. Khon Kean University. Khon Kean.
- Potisita, C., (2009). **Art and Science in qualitative research**. Amarin printing, Bangkok
- Potisita, C. (2006). **The Art and Science of qualitative research**. Bangkok: Amarin printing and Publishing.
- Rapeepat, A. (2008). **Culture is Meaning**. Bangkok: Princes Maha Chakra Sirindorn Anthropology Centre.
- Ratanawilailak, S. (2003). "Creating an identity through the forest on the Karen community." Master's degree thesis, Major Non-formal education, ChiangMai University.
- Santasombat, Y. (2004). **Ethnic Ecology Biodiversity and Community Rights**. Bangkok: Wit In Design.
- Satsagnuan, Y. (2003). **Main Cultural Anthropology**. Bangkok: Rama printing.
- Shea, A. (2012). **Designing for Social Change**., New York: Princeton Architectural Press.
- Somboon, V. (2007). **Pattern and Meaning of Holism**. Bangkok: Komol Keemtong foundation.
- Suwatcharapinan, S. (2014). **Towards Architectural Theories: Public Space and Social Space**. ChiangMai University Printing, ChiangMai.
- Suwichan, C. (2011). **Par-Son-Wat-Chan**. The association of Par-Ka-Ker-Yor for social development and environment, ChiangMai.
- Tamee, N. (2007). **The tragedy of the marginalised**. Chiang-Mai: Resolving the public highland Centre co-operation.
- Terdsaterasak, N. (2007). **Global Village**. Bangkok: Brand Age Books.
- Tolstoy, L. (2011). **What is Art**. Bangkok: Kledthai.
- Wallipodom, S., Songsiri, V. (2014). **Local and History**. Bangkok: Lek-Prapai Viriyapan foundation.

- Wallipodom, S., Songsiri, V. (2014). **Meaning of cultural landscape**. Bangkok: Lek-Prapai Viriyapan foundation.
- Wangsrikoon, A. (2000). "The synthesis of research on the learning process of the community and making community being strong." Ph.D. Thesis, Major studies development, Faculty of Education, Chulalongkorn University.
- William S. W. L. (2004). **Architecture Art Identity in Singapore**. Singapore: Asian Urban Lab.
- William S. W. L. (2006). **Alternative (Post) Modernity : An Asian perspective**. Bangkok: Art4D.
- Wonted, S. (2004). **Ethnic Suvarnabhumi Forerunner of Thailand in Southeast Asia**. Bangkok: Pikanes printing.
- Wongsingtong, P. Assoc.Dr. (2002). **Research Methods in Products Design**. Bangkok: Chulalongkorn University Publishing,



Biography

Name: Chanon Wasinghon
 Student No: 53155956
 Present post and place of work:
 Faculty of Architecture, Sripatum University
 61, Phaholyothin Road, Bangkok, Bangkok 10900
 Address: 21/450, Nawamin 42, Beungkhum, Bangkok 10240
 Contact: cwasinghon@gmail.com

Education background:

1993 Vocational certificate (Technical Architecture)
 Dusit Technical College
 1999 Bachelor of Architecture (Architecture)
 Sripatum University, Thailand
 2005 Master of Architecture (Interior Architecture)
 King's Mongkut Institute of Technology
 Ladkrabang, Thailand
 2010 Entered the Doctor of Philosophy
 Programme in Design Arts
 International Programme, Graduate School,
 Silpakorn University

Professional background:

2002 – 2003 Architect & Designer
 Budji + Royal
 2004 – 2005 Lecturer
 Faculty of Industrial Technology,
 Phranakhorn Rajabhat University
 2006 – Present Lecturer
 Faculty of Architecture, Sripatum University